ABSTRACT OF

The Morton Lecture

ON

CANCER.

Delivered at the Royal College of Surgeons of England on May 3rd, 1894,

BY SAMUEL G. SHATTOCK, F.R.C.S. ENG.

MR. SHATTOCK commenced his lecture by saying that if cancer was a microparasitic disease it should be capable of experimental transmission. Mr. Ballance and he had carried out a series of experiments in which they had inserted portions of freshly removed carcinoma of the breast into the abdominal cavity, the subcutaneous tissue, the muscles, and the anterior chamber of the eye of various animals. The result was in all cases negative; the portions so inserted underwent coagulation necrosis, and were either absorbed or became encapsuled. At the present time there was no authentic case on record in which human carcinoma had been transferred to any of the lower animals. Success, however, had followed in certain cases when the transplantations had been made from one animal to another of the same species, and in this the results followed the laws of grafting rather than those of ordinary infection; they showed that a portion of a growing carcinoma if so transferred would grow in a second individual as it would have done in the first, but they did not really show that carcinoma was infective. A graft from one species of animal never formed an integral and permanent part of another of a different species. He referred to Hunter's grafting of human teeth to the combs of cocks as showing only that the "graft" in certain of these experiments remained aseptic, and like any aseptic dead substance it contracted vascular adhesions with the surrounding tissues. To prove that cancer was infective it would be necessary either to isolate the infective agent and produce the disease with this, or adopt the less difficult method of using the tissue for purposes of infection after sufficient time had elapsed to ensure that the proper tissue cells were dead. There were two considerations, however, before concluding a negative. It might be that a preparatory inflammation was necessary. It was in this direction that Mr. D'Arcy Power was carrying out excellent work. Or it might be—and it was to this that Mr. Ballance and he inclined—that the phase of the hypothetical infective agent was not such in the tumour as would set up the disease by direct transference.

Although there were such strong clinical reasons for regarding cancer to be an infective disease, it was only lately that methods had been devised of cultivating a contagium vivum. After the rise of bacteriology it was natural to attempt the growth of a specific microphyte from carcinoma. In this country Mr. Ballance and he had made a long series of experiments in this direction and with a negative result, and he might state that up to the present time no specific microphyte, bacterium, micrococcus, or other had been cultivated from carcinomatous tumours. This led him to discuss, nextly, the microzoic theory, which attributed the growth of carcinoma to the action of a specific protozoon. Such a protozoon would induce the new formations, not by its mechanical presence, but, as in the case of bacteria, by the chemical changes incited by it. An excellent historical summary of the histological appearances held by different observers to indicate the presence of such a body was given by Noegerrath up to the close of 1891. Since then Soudakewitch in Russia and L. Pfeiffer in Germany had, amongst others, published observations, but if he must select one it would be Dr. Ruffer, who had approached the subject with an intimate knowledge of histology and a commendable spirit of criticism, and the value of whose work had been enhanced by Dr. Galloway's confirmation. He referred to Dr. Ruffer's latest description of the only body in carcinoma that could be claimed with any probability as a protozoon, and then discussed what could be stated as to its life history—that is, especially as to its method of reproduction. In the case of the best-known parasitic protozoa in vertebrata and invertebrata there was a distinct life history, portion of which was in some cases passed outside the body of the host. And there was highly interesting evidence pointing to the probability that this was so in the case of carcinoma—viz., its endemic character in particular districts. Mr. Haviland's conclusions, drawn from his collection of statistics in England and Wales, were that cancer was most prevalent along the courses of rivers which seasonally flood their banks, and especially where, from the flatness of the country, the floods were retained. The districts about the Thames and Severn and Mid-Devon and Yorkshire rivers were especially noteworthy, but there were lesser areas where the endemic character was still more highly pronounced. The best of such was that described by Mr. Law Webb—viz., a small village in a certain part of Shropshire. In this, in a small group of cottages, there were nine houses in which one, two, or more cases of cancer had occurred during the last twenty-five years. A little further off were two houses under one roof, which might be called A and B. In House A a man died from cancer of the rectum; the next occupiers were a man and his wife, the former of whom died from cancer of the stomach, the latter from cancer of the rectum. In House B a woman died with carcinoma of the breast. House A was then taken by three spinsters, one of whom died from cancer of the uterus, another from cancer of the stomach.

The coccidium of the rabbit offered one of the best-known illustrations of the process in which a certain phase was passed outside the host, and this had been fully referred to by Dr. Galloway in the Morton Lecture of last year. In other cases the entire series of phases were passed through within the host. The parasite which J. Steinhaus had named "karyophagus salamandræ" was an illustration. This passed its life entirely within the cells of the intestinal epithelium of the salamander, and, though in certain phases its nature might admit of doubt, the proof of its being parasitic was obvious in the formation of sickle-shaped spores. This led him to point out that this pathognomonic sign of a parasitic element, though it had been alleged to occur in cancer, was not yet forthcoming. The so-called sickle-shaped bodies described and figured by Soudakewitch and others had been discountenanced by Metchnikoff; they had not the regularity of true sickles, and in their forms and staining reactions they were represented by chromatic degenerations of cell nuclei. He referred to an instructive series of forms similar to such, which were figured by Demarbaix[1] in the small lymphoid cells of the bone marrow of the rat examined several hours after death, and one might see the same in dying leucocytes in inflammatory foci; the nuclear chromatin became ring-shaped, or parted into sickles or less regularly shaped elements, and finally became fragmented into lesser portions and distributed through the cell; in polynucleated cells the different nuclei, or parts of the nucleus, might undergo like cadaveric alterations. In cancer cells such false sickles might arise from changes occurring in included leucocytes or the smaller lymphocytes, or possibly in portions of the cell nucleus divided off from the rest, or in the residues of chromatin resulting from irregular mitosis. As to the method of multiplication of the alleged parasite in carcinoma, this had been described by Dr. Ruffer as occurring only by binary division, or as a modified process, the nucleus might divide into parts which would become arranged peripherally, after which the protoplasm and capsule followed suit in the subdivision.

In a recent number of the *Journal of Pathology and Bacteriology* Dr. Cattle of Nottingham had figured what might be a spore cyst within a cancer cell. So important did this observation seem that he (the lecturer) wrote to Dr. Cattle, who kindly forwarded the specimen in question; but after careful study he had formed a definite opinion that this body was only a cell invagination in which the cell protoplasm of the included cell was highly vacuolated and the cell membrane well marked. There were in other parts of the section epithelial cells of which the protoplasm presented precisely similar appearances. At present there was no unimpeachable observation to the effect that a spore cyst was produced in carcinoma. He had limited his remarks to carcinoma of the breast, because in squamous-celled carcinomata the complications arising from horny change were introduced, and certain appearances due to this had been taken by L. Pfeiffer and others as parasitic: the cell body became homogeneous and the nucleus ceased to stain; in other cases invaginations of keratinising prickle cells were encountered, and these, too,

[1] La Cellule, tome v.

had been mistaken for parasites; J. Steinhaus had particularly drawn attention to such semblances. In these carcinomata, also, exposed as they were to the causes of common inflammation, collections of leucocytes had been taken for spore cysts holding nucleated spores; some such might be sections of vessels, but others lay in the epithelium. Their nature, however, was obvious from the fact that leucocytes could be seen in various numbers between the cells, and precisely similar collections had been described and figured by Mr. D'Arcy Power in the epithelium of the rabbit's vagina after the repeated application of liniment of iodine: a collection of polynucleated leucocytes, so closely packed that the outlines of the individual cells were not recognisable, was at first sight, nevertheless, a striking object. As to the particular body figured by Nils Sjöbring, Soudakewitch, and Ruffer, it ran perilously close (as usually displayed by the triple stain) to certain results of hyaline degeneration, yet when similar bodies provided with exquisitely arranged peripheral bars or granules were encountered our trust revived, for the only thing to which these were comparable were certain forms of such a protozoon as the coccidium oviforme of the rabbit's liver. One test, certainly, the body stood well, and that was the test of constancy; it was present in all carcinomata, and no precisely similar body had been produced in epithelium by common irritation, though Mr. D'Arcy Power had produced not a few other forms alleged in certain quarters to be parasitic. Dr. Richard Hebb had figured the particular body in question in a case of what he designated peritoneal fibrosis; but he (the lecturer) thought that most who read the report[2] would come to the conclusion that this case was really one of malignant disease, and confirmed rather than threw doubt on the contention put forward.

As still related to Koch's first postulate, he next drew attention to certain chemical questions. Three years ago, for certain chemical reasons, Mr. Ballance and he had been led to test the effect of aqueous or 50 per cent. glycerine extract of minced carcinoma and sarcoma, to which thymol, or a small proportion of carbolic acid, had been added for preservative purposes; the extracts were filtered and kept in sterilised test tubes in a refrigerator. Such extracts had no local or general effect upon rabbits when used subcutaneously. Speaking generally, the pathogenic action of bacteria arose from the specific albumoses and alkaloids which they elaborated. Could any such substances be extracted from carcinoma? If an aqueous extract of minced carcinoma was boiled and filtered the filtrate would give evidence of containing proteid, but this was due to the presence of acid or alkali albumen, according to the reaction of the tumour, which was uncoagulated by boiling. If the fluid was first acidulated with acetic acid, or, better still, boiled with an equal bulk of 10 per cent. trichloracetic acid, all the common proteids were precipitated; the filtrate was quite clear, and the test with dilute cupric sulphate solution, or with concentrated hydric nitrate, gave no trace of precipitate, proving the complete absence of albumose. As to alkaloids, he could say from the results obtained by Mr. Edmund White that these were equally absent. Albumose, however, might possibly be obtained from carcinoma under two circumstances, though in neither would it be of a specific or pathogenic kind. If putrefaction was allowed to ensue such a substance might be found. Many years ago Mr. John Marshall had made the observation that the reaction of a scirrhus of the breast was acid. He (the lecturer) had often found this in the tumours of which the unfailing kindness of Mr. Edgar Willett had supplied so many, and he had found the same in sarcomata; but this acid reaction arose only a certain number of hours after removal. As Mr. D'Arcy Power had shown, the reaction of a scirrhus immediately after its excision was alkaline or neutral—in fact, all, or nearly all, tissues became acid after death; this fact was well known in the case of muscle, and from the latter albumose was derivable owing to the action of the pepsin, of which a certain amount was in the general circulation. And so it might happen in carcinoma were the examination long delayed. There was another chemical question of much interest. The capsule of encysted protozoa consisted of cellulose or of what was in other cases assumed to be chitin. Was either such demonstrable in carcinoma? These substances were not present in the tissues of vertebrates. Professor Halliburton kindly undertook to test this possibility, and the investigation was most carefully carried out in the physiological laboratory of King's College by Dr. Grigor Brodie. At first the results were encouraging, but as Dr. Brodie perfected his method they became less so and ended in a complete negative. The principle of the method was as follows. The tumours were minced and boiled in 20 per cent. caustic soda, and filtered hot through asbestos. A small residue of fats in excess was left upon the filter, and in this residue there would have been any cellulose or chitin, which were insoluble in boiling caustic soda or potash. The residue, after being treated with boiling caustic potash solution, then boiling distilled water, and then with weak hydric sulphate to neutralise the alkali, &c., was treated with concentrated hydric sulphate. Cellulose was soluble in hydric sulphate, chitin insoluble in this, but soluble in hydric chloride. The acid drawn through the asbestos by means of a pump was diluted and boiled. Had cellulose been present it would thus have been converted into dextrose, or grape sugar, and the presence of this would have been easily recognisable by means of Fehling's solution. No such reducing substance was found. The asbestos was next treated with concentrated hydrochloric acid. The filtrate was quite clear and gave no precipitate on dilution, as it would have done had chitin been in solution. Nor was a reducing substance obtained by boiling the hydrochloric acid after dilution.

Mr. Shattock next proceeded to consider the second postulate of Koch—viz., the cultivation of a micro-organism alleged to be in the tissues, outside the body. It was with this that Mr. Ballance and he had been for some time occupied. They had used test tubes of milk with 5 per cent. glycerine, dilute broth, and other fluid media; into these, portions of the growing edge of carcinomata of the breast had been placed and examined by means of sections at different dates. They had, however, given up such methods as not sufficiently natural or like the conditions a parasite would meet with in its natural history outside the body. They had found that psorospermial material from the rabbit's liver placed into broth or even in sterilised rabbit serum underwent practically no further change; the conditions were not sufficiently natural. He then described and showed the method they had now adopted of using sterilised sand in Petri capsules or deeper ones kept between double dishes, and the whole beneath a shade on a sheet of glass. Specially distilled water was used, and this was boiled four hours in a sterilised flask before use. Into such capsules pieces of the growing edge of mammary carcinomata were placed. And now he came to a result which, if confirmed, would fully repay for the negative character of the rest. In no less than six capsules, five of which were infected from different tumours, they had obtained actively moving amœbæ. Some of the earlier of these experiments were not conducted with all the precautions desirable, and they hoped in a few weeks to satisfy themselves on this question, as they had a new series of such experiments almost mature for examination, together with many check experiments made with the muscle, pancreas, spleen, mamma, &c. of the human subject, as well as of dogs. In check experiments made with sterilised sand and distilled water or tap water, to which a small quantity of broth or blood plasma had been added, they had obtained no similar results.

There was one body that for a while diverted attention. This was a flattened, circular, or oval structure, radially striated in its periphery and corresponding in size with the element met with in carcinoma. It occurred in all the samples of silver sand examined, as well as in sea sand, and its general look suggested a skeletal nature. It was unaffected by baking; on the addition of hydrochloric acid it rapidly parted into radial segments and then utterly vanished. Professor Dallinger had not been as yet able to name it, but it was probably a segment of some foraminiferous protozoon. Were the amœbæ leucocytes? Professor Sherrington had made the interesting observation that in the blood drawn from the dog, and prevented from coagulating by the intravenous injection during life of oxalate of potassium, the white corpuscles will exhibit movement for as long as three weeks; in the frog observation had also shown that the leucocytes will remain alive six weeks after the blood is drawn. That the bodies in question, however, were not surviving leucocytes was proved by their living in water, the action of which was lethal in the case of the mammalian corpuscle; and it was evident, from the great numbers found in the larger capsules, that a process of multiplication was concerned. But what completely disproved this possibility was that there were other phases met with in the sand of the capsules—encapsulation

[2] Transactions of the Pathological Society.

and sporulation. One of the tumours used was a sarcoma. And, should the results be true, it was not a little curious that the same microzoon occurred in carcinoma and sarcoma. In sarcoma Dr. Ruffer had not yet described such a body as that present in carcinoma.

He concluded, however, with an analogy. One of the most remarkable modern discoveries in connexion with vegetable galls was Professor Adler's, that what were once taken to be two distinct gall-making insects are but different phases, or alternating generations, of a single one; and there were many such instances. And the interesting point was that the galls produced by the same insect in its alternating phases were markedly different. One of the commonest kinds was one of the best illustrations. The common spangle on the under side of the oak leaf was the produce of one phase of a gall-making insect, the currant gall on the male flower was the produce of the other phase of the same. So it might be in carcinoma and sarcoma.

ABNORMAL MUSCULAR CONTRACTIONS AND THEIR EFFECTS.[1]

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I PROPOSE to say a few words respecting certain morbid phenomena which we observe in connexion with variations in the contractions of muscles.

PRETERNATURAL MUSCULAR IRRITABILITY.

First, on those depending upon excessive muscular irritability. In considering the irritability of muscular fibre we must remember that there are two factors concerned—the irritability of the muscular fibre itself and the irritability of the nerve or nerves supplying it. Seeing, however, the difficulty which physiologists have found, even with the parts exposed under their eyes, in discriminating between these, it is scarcely to be expected that we should be able to make a distinction between them, practically, in the living body. Indeed, they are so intimately associated that it is most probable they usually participate in their variations—that in those persons in whom the nervous system is over-susceptible the muscular system is so likewise, and *vice versâ*. With regard to both, or rather the combination of both, we find considerable variations within what we may call the normal area. The two are much more alive in some persons than in others. Some persons start at the bang of a door, which has no effect upon others; and in some the will impulses are more briskly responded to than in others, the movements being quick, perhaps jerky. On the whole, within the normal area some relation—one of inverse proportion—is observable between force and irritability, the muscles of women and delicate persons being more readily called into action than those of men and of strong persons. The greater rapidity of action in the former in some measure compensates, may even more than compensate, for the greater power in the latter. This, it may be observed, is in accordance with a general principle of construction in the human frame in which, by the attachment of muscles in the proximity of joints, power is, with great advantage, sacrificed to rapidity of action. In the knee-jerk, or patellar reflex, we have a good illustration of the differences of muscular or neuro-muscular susceptibility in different persons. In some, those chiefly of the delicate and sensitive type, a gentle tap upon the tendo patellæ will cause a marked forward jerk of the leg, whereas in others it will produce little effect; and this variation, which within certain limits may be no indication of disease, must be borne in mind in observations with reference to the pathological import of this and other similar phenomena in the clinical examination of patients.

These and many others that might be adduced—and many will occur to you—are instances of variations of muscular irritability within what I have called the normal area—that is, variations which are associated with certain temperaments or constitutions, and which are habitual or natural to them. There are, as may be expected, many conditions, chiefly those of lowered bodily tone, in which irritability exceeds the normal bounds—the bounds, that is to say, normal to the particular individual—and becomes a malady; such, for instance, as the chorea of delicate children, in whom the system has by some cause become morbidly atonic and in whom the slightest excitement—the being addressed, even in a familiar manner, or an ordinary volitional effort—will induce numberless involuntary movements. In the same category, associated with incompleteness of directing force, may be ranged the unsteadiness of the movements of the hand and other parts—the paralysis agitans—in the aged and also in the drinker; and in both of them there is usually more or less nervous as well as muscular atony, with perhaps atrophy, exhibited, or rather observable, the atrophy being more particularly evinced in the shrinking of the brain. The startings of the limbs in going to sleep in those who are somewhat exhausted by fatigue or anxiety, or who are in lowered health, are of like nature. The same thing is evinced occasionally in particular muscles, especially by the twitchings of the delicate fibres of the orbicularis oculi lying upon the upper eyelid, which are habitually and normally called into action by the inappreciably slight stimulus of moisture upon the cornea. Such movements are also liable to occur in muscles which have been enfeebled by suspension of the influence of the will. We have all heard of the spasmodic jerkings in Nelson's stump, noticeable when the enemy's ships were in sight and when action seemed imminent. Not long ago a young woman in the hospital was so tormented by jerkings forward of the stump of her thigh that I found it necessary to remove a piece of the anterior crural nerve to give relief, and I performed the same operation in a girl in whom the twitchings of the quadriceps extensor cruris prevented the healing of the fore part of the wound after excision of the knee. Frequent examples of the same kind are furnished by the painful startings of the parts experienced by those who are suffering from ulceration of articular cartilages, and which is so characteristic of that condition. These startings are most noticeable when the knee is the seat of disease. Observe the circumstances under which they occur. The patient is probably enfeebled by the disease which has been going on in the knee. The muscles which act upon the knee have been still further enervated and rendered flaccid and preternaturally irritable by suspension of their action. The patient is in the relaxed, unstrung state of commencing sleep, and is suddenly woke up by the severely painful starting movements in the diseased knee, and this probably recurs when he again falls asleep. The slightest thing in severe cases will produce this effect—some little disturbance in the room or movement of the bed, some slight movements of the rest of the body, such as are often experienced by the weak, or even by the strong, on going to sleep, and which are especially liable to occur in the hyper-irritable muscles of the affected limb; or some little change of position or other change in the knee excites reflex action of these muscles. Any of these causes are sufficient to induce the painful result, and it may be brought about in the waking hours in like manner. It may commonly be controlled or prevented and rest given by fixing the limb upon a splint, in the extended position if possible, with a bandage carefully applied along its whole length.

We all know how much nervous and muscular action is facilitated by habit, the paths of the transmission of impressions being rendered smooth and easy by the traffic along them, or, rather, the chemical and other changes associated with the exercise of the requisite function being facilitated by the frequent occurrence of them. This may go to such an extent that movements often indulged in or excited by some irritation will persist, as it were, spontaneously—a phenomenon which is especially noticeable in the muscles of the face and neck, causing repeatedly recurring spasmodic closure of the eyes, pouting of the lips, twitching of the corners of the mouth, or noddings of the head. Moreover, the contractions of certain muscles, thus commenced and not duly counterbalanced, may become permanent—to wit, that of the rectus internus oculi in children who become squinters from thoughtlessly having contrived to imitate a squint in others. Hence the other eye has to be closed for a time to restore the proper extensibility of the over-excited muscle as well as that harmonious give-and-take, or balance, between opponent muscles which is requisite for the movements of the eye and for so many of the other movements of the body. Wryneck may be induced in a similar manner, and is curable in the early stages—as we found the other day in a young woman in the hospital—by resting the head upon a pillow. In writer's cramp the neuro-muscular apparatus, over-fatigued and exhausted beyond the power of

[1] A paper read before the Cambridge Medical Society.

repair by persistent efforts, in many cases passes beyond the stage of spasm, or cramp, into that of more complete paralysis. Not long ago among the out-patients was a strong and otherwise healthy man, engaged in a printing office, who had lost the power of extending the fingers of one hand because the flexor muscles, habituated to manipulate a roller, had become contracted, firm, and knotty. We fixed the fingers and wrist in an extended position upon a splint, but I do not know the result, for we lost sight of him. In these and similar cases, such as the cramp of piano players and violinists, the wearied and enfeebled muscles first undergo an increase of irritability and a tendency to spasm, which may be followed by more or less imperfect subjection to volitional impulses or paralysis. In the early stages they are commonly relieved or cured by the repose requisite for structural repair; but we find that repose must in many cases be long continued, forasmuch as a muscular or nervous structure repeatedly and much fatigued undergoes change which, in greater or less degree, unfits it for the gentle, delicate processes of reparative nutrition. I do not attempt to reconcile the abnormal irritability and spasmodic contractions of muscles in these enfeebled or exhausted conditions with experiments made in the physiological laboratory, for these seem to point rather in the opposite direction, and indicate that a diminution of irritability is the usual concomitant of the lowered nutritive conditions attendant on fatigue, defective supply of arterial blood, or other causes.

It is interesting to note that, although the various involuntary muscular contractions to which I have alluded are most common in enfeebled persons and enfeebled muscles, they do not, even when long continued and, it may be, violent, produce further exhaustion or sense of fatigue. This is in accordance with the recognised, though not easily to be explained, fact that involuntary movements are commonly not attended with the same indications of wear or fatigue as are those which are the result of voluntary effort. Possibly, as has been suggested, it is the effort of the will wherein lies the exhausting part of the process of ordinary voluntary muscular exertion.

FRACTURES CAUSED BY SPASMODIC MUSCULAR ACTION.

While upon the subject of muscular spasm I may remark that the volitional impulses cannot call forth the whole amount of force which a muscle—probably any muscle—is capable of exerting, possibly because they cannot call more than a certain quantity of the muscular fibres into action at one and the same time; and the strength of the skeleton in each person is adapted to bear the strain of the greatest voluntary contraction of the muscles which can at any one time be brought to bear upon it in that person. It would be an ill construction if it were much stronger than this; and it follows that a bone is very rarely broken by any voluntary muscular action—by any effort, that is, of the will. The bone—perhaps the only bone—which occasionally suffers in this way is the humerus, at or near its middle joint, above which part are inserted the powerful muscles—deltoid, pectoralis, latissimus dorsi, teres major, and coraco-brachialis—which wield the upper limb upon the shoulder, and which have so long a leverage of the upper limb against them. Thus I remember an undergraduate in whom this bone gave way when he was "putting the weight," and an old man who broke it in pulling himself upstairs by the handrail. I do not suppose that any purely *voluntary* muscular effort would break the patella, or ever has done so; but the sudden *spasmodic* contraction of the quadriceps extensor cruris caused by a slip in the semi-extended position of the knee does not infrequently break off transversely the upper larger half of the bone. The sternum has been snapped by the recti abdominis muscles under similar circumstances, and a former colleague narrated to me a case in which the shaft of the thigh bone was broken during the violent spasms that ushered in a severe attack of Asiatic cholera. In such cases it would seem that inordinately strong sudden impulses call into play simultaneously a larger amount and greater force of muscular action than the will can command, a force greater than the bony framework, calculated to meet only ordinary requirements, is able to withstand.[2] These remarks apply also to the snapping of tendons and the rupture of muscular fibres. This last event is said occasionally to occur in the sterno-mastoid in parturition and to be one cause of wryneck. It now and then happens in the rectus abdominis, the strain upon which in raising or flexing the trunk upon the pelvis is very considerable, and it may be that the segmentation of this muscle by tendinous intersections tends to prevent such rupture by distributing among the fibres and bundles of one part the pull caused by the contraction of particular fibres or bundles of another part, and that the like purpose is served by the homologous segmentations of the long, very powerful, and suddenly acting lateral muscles of fishes. The rectus abdominis is the longest muscle in the body next to the sartorius, and has much greater demands upon it than that muscle for sudden violent action, and it therefore stands especially in need of some such arrangement to prevent the disaster which still does occasionally take place.

[2] In a case recorded (Brit. Med. Jour., March 31st, 1894) as "compound fracture of the tibia and fibula by muscular action" the result seems to have been caused by a sudden violent twist of the limb under the weight of the body, the foot being fixed on the ground, and is scarcely, therefore, an example of fracture by muscular force.

PERSISTENT CONTRACTION AND SHORTENING.

Let us pass now from the consideration of these states of morbid irritability and spasmodic muscular action to the consideration of conditions of a somewhat opposite nature in which the muscles have a tendency to shorten in a more or less persistent or permanent manner. I have already mentioned this to be an occurrence occasionally ensuing as a consequence upon exalted or maintained irritability and correspondent muscular action, which I exemplified by some cases of wryneck and strabismus, and many other instances of the like kind might be adduced.

The shortening to which I refer seems to resemble not so much a muscular action as the slow process of contraction which takes place in blood plasma and in organised plastic or lymph formations produced by inflammatory process, and in cicatrices, and to some slight extent that which occurs in rigor mortis. It is not, however, so rapid as the latter or so evanescent; it is not attended with the same loss of irritability; and is, indeed, not so obviously a death change. Whether it is attended with the changes in form of the sarcous elements and the chemical changes which occur in rigor mortis or in ordinary muscular action I do not know, and I am not aware that any experimental observations have been made in reference to it. It may perhaps be best regarded as the result of a sort of shrinkage-property appertaining to the vascular, connective, and other tissues, as well as to muscular fibre, in varying degree, which adapts them to the varying and ever-recurring changes of volume and circumstance in the living body, so maintaining a certain consistency in the soft parts of the body and preventing flaccidity. At the same time there is need of the several circulatory and other changes attendant upon living processes to keep it in check and to restore the tissues from the condition into which they have shrunk or contracted, just as in a more marked manner a stricture requires occasional stretching with a bougie to maintain the patency of the narrowed canal. When muscles are diseased this condition of shrinking or contraction commonly sets in, and in the limbs the greater or stronger mass of muscles at each joint, which are usually on the flexor aspect, dominating over the extensors, draw the several parts into the flexed position and hold them there. Hence it is that the action of the extensors, under the influence of the will in the ordinary movements of life, is necessary in order that the flexors may be often stretched and so prevented from assuming the shortened and less pliable or less yielding state which is apt to be consequent on long-continued repose. The frequent and sometimes startling movements of the fœtus in utero doubtless serve, among other purposes, to give and maintain this muscular balance, and their failure is the probable cause of certain congenital deformities which we often see, such as talipes varus. Bedridden persons, lying with the lower limbs habitually bent and unused, gradually lose the power of extending the hips, knees, and ankles, while the extensor movements of the upper limbs, maintained by various voluntary actions, prevent the like rigidity of the flexors in them. It is, therefore, very important, especially when there is a prospect of recovery from the bedridden state, to prevent this shortening of the flexors, and consequent fixity of the limbs, by maintaining frequent voluntary or passive extensor movements. This is the more important because the ligaments, in process of time, shorten like the muscles, and offer, perhaps, even more resistance than the latter to the restoration of the movements of the limbs.

CONTRACTIONS OF JOINTS.

Attention should also be paid to this in the treatment of diseases of joints, for one of the difficulties we often have to

deal with after the disease has passed away is the contracted or shortened condition of the dominant muscles, and the inability of their opponents to effect the requisite stretching of them. Another difficulty associated with this rigidity is the pain in the contracted muscles. It commonly, for some reason, is referred to their tendons, and is in many cases severe, perhaps unbearable without an anæsthetic, when any forcible attempt is made to stretch them.

One of the parts in which this result is most common, and to the prevention of which the attention of the surgeon has been too little directed, is the shoulder. The extension or abduction of that joint—the raising, that is, of the upper limb from the side—is, even in the healthy state, rather a fatiguing movement. The carrying it to its full extent is almost peculiar to man, and the maintaining the limb at a right angle with the trunk will soon weary the strongest person. The fact is that the adductors—the pectoralis, latissimus dorsi, and teres major—are stronger, have far better leverage, and are more favoured by gravity than their opponent abductors—the deltoid and the short muscles about the joint—and stronger efforts are required of them. Hence, if the joint be kept at rest, with the arm to the side, on account of disease or injury which may be slight, or in consequence of some injury to the clavicle or any part of the upper limb, such even as fracture of the radius near the wrist, the deltoid soon loses the power of stretching its opponents, gives in and speedily wastes, and the patient is unable to raise the elbow. After a time the difficulty is further increased by the shortening or shrinking of the under part of the capsule of the shoulder-joint, with perhaps adhesions of the wrinkles or folds into which this part of the capsule is thrown in the adducted position. Pain is caused by any attempt at movement, and in some cases is felt at other times, especially at night. The patient readily yields to the popular persuasion that a "bone is out," and probably resorts to a quack to "put it in." The frequency with which we meet with the condition referred to is sufficient evidence that medical men are not properly alive to the liability of the occurrence and to the necessity of taking the measures requisite to prevent it. These measures are very simple. In all injuries at or about the shoulder, including dislocations of the shoulder and fractures of the clavicle, care should be taken as soon as it can be done with safety to move the elbow from the side and raise the arm to a right angle with the trunk. This should be done on each occasion of removing the bandages, and with more frequency and persistence as the time after the accident increases. The same should be done in all other cases in which it is desirable, for purposes of treatment of any affection, to keep the arm to the side, and it is most important to attend to this when the patient has passed or reached the middle period of life. Much benefit to the patient and saving of reputation to the surgeon will be gained by judicious attention to this point.

When these precautions have not been taken, two or three months after the accident, supposing there to have been one, the shoulder will have become fixed and perhaps painful, the pain extending down the arm, and the parts about the shoulder, especially the deltoid muscle, will be wasted. The patient, unable to raise his arm or put his hand behind him, and impeded in various ways, becomes dissatisfied, has wisely lost faith in embrocations, rubbings, and the effect of time, and clamours for relief. This may be given in one of two ways. The first is by fixing the shoulder and carrying the arm suddenly and forcibly from the side to a right angle with the trunk, which is the normal limit of shoulder-joint movement. In this process, which is the quack or bone-setter's plan, the adhesions which have formed at the under part of the joint are torn, and the capsule also, at this part, may be more or less torn, this being attended sometimes by a snap or sound simulating a "bone going in," and contributing much to the credit of the quack; the abductor muscles are stretched, and much is gained towards the restoration of the movements of the shoulder. This heroic method, however, is severe, and is not altogether unattended with risk, though I have not known any particular evil to result from it in my own practice, and it is not always effectual. I commonly resort to a slower and gentler plan of stretching by directing the patient to sit habitually with the elbow raised on a table or some higher level, to sleep with a stout bolster fixed between the arm and the side, and to exercise the limb many—a hundred or more—times a day by raising the hand, creeping up, as it were, with the finger upon the edge of a door till the top is reached, holding on there for a time and then bringing the hand down slowly. In this way the adductor tissues are gradually stretched and the abductor muscles are strengthened; baths, shampooing, massage &c., may aid, but liniments and embrocations are worse than useless, because they divert attention from that which is really needed and waste time. It is one of the many instances in which patient perseverance in treatment is necessary and will be rewarded.

These remarks are applicable, *mutatis mutandis*, to other joints, particularly those of the lower limb. In the knee, for instance, the power of full extension—such extension as gives a slightly curved outline to the part with the convexity backwards, and which brings the flat under surface of the condyles into contact with the tibia—is easily lost and with difficulty regained. It requires the full assent of the flexor muscles as well as of the posterior ligaments, which are then tightly stretched over the back part of the condyles of the femur, forasmuch as the tibia during this movement, and as a necessary part of it, slides a little forwards beneath the condyles. Now if the knee be allowed to remain bent, in consequence of accident or disease, the flexors, acquiring proportionate leverage, soon preponderate and shorten, the posterior ligaments contract, and much difficulty is experienced in extending the joint, and there is often very great difficulty in effecting complete extension. Indeed, as we know, the flexors not infrequently draw the tibia a little backwards upon the femur, causing that slight subluxation which adds a further serious obstacle to the sliding movement of the tibia requisite for extension. Many limbs are rendered permanently useless by this deformity, or resection of the joint is needed to enable the foot to be placed upon the ground. I do not mean that this ill result can always be avoided. Children with affection of the knee are often allowed to go limping about till the flexed position is assumed, the joint becomes habituated to it, and there is much difficulty in effecting extension. The liability to this occurrence should, therefore, be borne in mind in the early treatment of knee affections, even though they be slight, and measures should be adopted to meet it. It is important also to beware of the same tendency in the foot and ankle under various circumstances. The weight of the bedclothes, for instance, upon the toes in persons long recumbent may induce it; and it is no infrequent source of trouble in the after-treatment of fractures of the leg as well as of disease of the ankle.

HAMMER-TOE.

The position assumed by the toes is an illustration of the same influence; they are laid up in leather and not used. The phalangeal joints are kept flexed by the dominance of the flexor muscles, and in most persons can be only imperfectly straightened by the action of the extensors, while the metatarso-phalangeal joints are hyper-extended by the pressure of the toes upon the ground, and the extensors acquire more or less dominance over these joints. This, which becomes in each person what may be regarded as the normal state in the shoe-clad foot, is occasionally exaggerated, more particularly in the second toe. That toe is more than any other at a disadvantage by reason of the encroachment upon its territory by the great toe, which fashion pushes outwards. Hence it comes about that the first phalangeal joint of the second toe is often projected markedly upwards, constituting what is called "hammer-toe," and becomes the seat of a painful corn, the annoyance being such that amputation of the toe is not infrequently resorted to for relief. The condition is aggravated and confirmed by contraction of the lateral ligaments and other tissues on the under surface of the joint, and I found ankylosis of the bones here; but that the condition is primarily due, as I have said, to contraction of the flexor muscles, and not, as has been urged, to contraction of the ligaments, is proved by the fact that in the early stages the toe readily assumes its natural position if the flexors are relaxed by pressing down the first phalanx. The great toe, which has a special extensor muscle and is commonly pressed in its whole length upon the ground, is less liable to this affection. It may, however, be shoe-bullied into the troublesome state of "hammer-toe" in which the phalangeal joint is thrown upwards, and the extremity and nail of the toe are pressed upon the ground.

THE ELBOW.

In the instance of the elbow the supinator longus stands out as a marked adjunct to the other flexors of the joints; and long-continued, patient extension by mechanical means is needed to overcome the combined contraction of these muscles.

DEFORMITIES OF THE HAND.

In the hand the deformity—a no uncommon result of chronic rheumatism—usually manifests itself in a flexure of the fingers upon the metacarpus and a slanting of them towards the ulnar side, this last being due to the preponderating influence of the so-called "abductor" muscles. The first phalangeal joint of the little finger is often somewhat flexed, and this is the case usually with the terminal phalangeal joints of all the fingers; but the middle joints are not unfrequently over-extended so as to be rendered convex on the palmar aspect. It will be observed that these positions are to some extent the reverse of those which usually occur in the toes, where the metatarso-phalangeal joints are extended by the pressure upon the ground and all the phalangeal joints become flexed.

The position of the toes, as I have already said, is probably due to their being pushed upwards on the metatarsus by pressure upon the ground, which will have an influence in causing flexure of the phalangeal joints, forasmuch as the flexor tendons are thereby put and kept upon the stretch; and it may be remarked that this condition—hyper-extension of the metatarso-phalangeal joints and flexion of the phalangeal joints—is most marked in cases of talipes equinus in which the bearing upon the balls of the toes is nearly vertical. But why in the disabled hand the proximal phalangeal joints should so often be hyper-extended, while the terminal joints and the matacarpo-phalangeal joints are flexed, is not easy to explain. It is, moreover, a combination of positions which few persons can voluntarily effect, flexures of both phalangeal joints being habitually coördinated, in consequence, I suppose, of the flexure of the terminal phalanges, to which the lateral parts of the extensor tendons are attached, causing tension of these lateral parts and, with that, a dragging forward and relaxation of the middle parts which are attached to the second phalanges. The same influence exerted along the extensor tendons will have its effect upon the metacarpo-phalangeal joints as well as upon the phalangeal joints, and thus facilitate the harmonious combination of flexor movements requisite for grasping with the fingers. This view of the manner in which the normal combination is facilitated does not, however, assist in explaining the abnormal combination of hyper-extension of the proximal phalangeal joints with flexion of the terminal joints to which I have referred, and which is a not uncommon condition in rheumatic and some other affections.

IN PARALYSIS.

In paralysis the same results of disease manifest themselves in the various parts of the affected limbs. The muscles waste, and the shortening process, which in time affects the connective tissue as well as the fibres of the muscles, has full scope in the flexors, now unresisted by voluntary or any other action of the extensors. Thus in the upper limb the arm hugs the side, the elbow and wrist become bent, the thumb is drawn in to the palm, the fingers are bent upon the metacarpus and slanted towards the ulnar side, the terminal phalangeal joints are bent, and the proximal joints are flexed in some instances and in others extended. In the lower limb the weight of the limb and of the bedclothes and other influences commonly suffice to maintain extension of the hip and knee, and the pressure of the sole upon the ground will often have the like effect upon the foot and ankle. In cases of infantile paralysis of the leg and foot, however, how common it is to find the heel raised, the arch of the foot heightened, and the toes much flexed, and how difficult it is to overcome the deformity—the talipes equinus and cavus—thus induced, even though the paralysis may have subsided.

CONGENITAL CLUB-FOOT.

The subject of club-foot carries us into fœtal life, during a large part of which the jerky movements, in whatever way induced, serve the purpose of maintaining muscular balance; and they are continued after birth in the peculiar stretchings of the fingers, toes, and other parts noticeable in infants. These subside as voluntary influence comes to bear upon the muscular system. Congenital club-foot, which usually takes the form of talipes varus, is due, I apprehend, to a deficiency of these movements and a consequent want of resistance to the contraction of the dominant muscular masses, whereby the foot is inverted, the plantar arch is rendered excessive, and the heel is raised. The inversion and the plantar flexion in these cases are usually more pronounced than the heel elevation, which may be due to position in utero. At any rate, in infantile paralysis the inversion is usually less pronounced than the heel elevation and the plantar flexion. The slight obliquity in the neck of the astragulus, by some regarded as a cause of the deformity, is, I believe, in reality due to the traction exerted upon it as a consequence of the deformity. Specimens illustrating this view are mentioned by Dr. Griffiths, with an account of a case of talipes dorsalis, in the *Brit. Med. Jour.* of Dec. 20th, 1893.

INVOLUNTARY MUSCLES.

How far do the above remarks with reference to hyper-irritability on the one hand, and chronic contraction or shortening and shrinking on the other, apply to the involuntary or unstriped fibres? It may be noted that the capability of stretching and the range of action of these muscles exceed those of ordinary voluntary muscles. The healthy urinary bladder, for instance, contracts from the fully distended condition when it holds a pint or more till the last drops are expelled, and this it does quickly. The same is true, though less obviously, of the stomach and other parts of the alimentary canal. They all maintain a certain continuous pressure upon their contents by a process analogous to the tonic contraction of voluntary muscle, and may thus temporarily quite close up or obliterate their cavities, as we find to occur in the stomach after fasting, or when there is disease of the œsophagus. Whether this goes on to the persistent contracting and shortening, with shrinkage, of the muscular fibres and inter-muscular tissue is not easy to determine, though it seems probable that it may do so; and this condition of the bladder induced in old vesico-vaginal fistulæ seems to be one of the causes of difficulty in the treatment of these cases. Moreover, we know that increased irritability is easily induced by a slight disorder of the lining membrane or of the nerves supplying the mucous and muscular fibres. Thus we have irritable bladder, irritable rectum, and irritable stomach, the expulsion of the contents being frequent and the demand for it urgent, and a hyper-irritability of the sphincters may be an occasional cause of difficulty in the expulsion of the contents of the bladder and rectum. Hence there is, on the whole, reason to believe, what analogy would lead us to infer, that the involuntary muscles are subject to the laws with regard to irritability and slow contractile process similar to those of the voluntary muscles. I say *similar*, forasmuch as the conditions under which the morbid phenomena I am discussing occur are not quite the same in the two sets of muscles, possibly because the nerve relations of the two are, to some extent, different. Thus in chorea and other allied nervous affections which may be evinced throughout the voluntary muscles, the involuntary system—the urinary bladder, for instance—does not usually participate.

Cambridge.

THE ACTION OF RATTLESNAKE VENOM UPON THE BACTERICIDAL POWER OF THE BLOOD SERUM.[1]

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AN apology would be necessary for introducing a subject of this character on the present occasion if it were not that the loss of life from poisonous reptiles has become so great that it calls for the best efforts of not only the military surgeon but medical men generally to lessen it. The mortality in India alone reaches the alarming figure of 20,000 persons annually; hence it was not a strange coincidence that it should have fallen to the lot of the British Medical Service, led by Dr. (now Sir) Joseph Fayrer, to perform the pioneer work in that part of the globe. While much has been written upon this subject in general very little has been said or done in the special line to which this paper relates.

At Professor Welch's suggestion we conducted a series of experiments in the pathological laboratory of the Johns Hopking University during the spring of 1893, having for their purpose the determination of the action of rattlesnake venom upon the bactericidal power of the blood. Dr. Welch's attention was directed to the investigation of this subject by Dr. Weir Mitchell. Drs. Weir Mitchell and Reichert demonstrated that the poisonous properties of rattlesnake

[1] A paper read at the Washington Meeting of the Association of Military Surgeons

venom depend upon the presence of proteid substances. These investigators were the first to demonstrate the existence of the so-called toxic albumens. In their monograph on the subject, as well as from previous observations, it was apparent that the animals killed by rattlesnake venom decomposed with great rapidity; indeed, with such rapidity that Dr. Formad, who contributed an appendix upon the pathological anatomy of animals which had died from the effects of rattlesnake venom, believed that there was evidence of the spontaneous generation of bacteria. Dr. Formad thought it impossible for the bacteria to make their way into the circulation and multiply so quickly. This seemed so improbable to Professor Welch that he suggested to Dr. Weir Mitchell the importance of having this point investigated. Dr. Weir Mitchell kindly gave us a certain amount of poison. We were, however, fortunate enough to obtain a live rattlesnake of the diamond species, known as the crotalus adamanteus, from which the fresh venom was obtained and used in preference to the dried poison supplied to us.

It will not be out of place to recall briefly that the order Ophidia, of the subclass Reptilia, is divided into three subdivisions: (1) the Ophidii Colubriformes, or innocuous snakes; (2) the Ophidii Colubriformes Venenosi, or poisonous colubrine snakes; (3) the Ophidii Viperformes, or viperine snakes, poisonous. To the last subdivision, viperine snakes, belong the crotalidæ or rattlesnakes, called by Sir Joseph Fayrer "pit vipers," being distinguished from the viperidæ, or vipers proper, by possessing a pit or depression between the eye and the nostrils in the loreal region, a triangular, broad head, and thick body of variable length. The crotalus is distributed widely all over the globe, and all crotalidæ are terrestrial except in India, where quite a number of genera are arboreal; all, however, lack any semblance to the horny scales or rings at the tip of the tail known as the "rattle," except the species called halys, where the tail terminates in merely a rudimentary horny spine. It is of interest to note that the Indian crotalidæ are not so venomous as their American congeners, though Asia has a very deadly species known as the calloselasma rhodostoma resident in Java and Siam, while South America is represented by the well-known jararacca or craspedocephalus braziliensis. Australia and Africa likewise contain ophidians of this class, but they are little known. The crotalidæ of the United States are represented by ten species and three subspecies, all being equally poisonous, so far as we now know. Of these the adamanteus has three subspecies, one of them, the adamanteus proper, found in North America, extending from North Carolina to Florida; a second, the atrox, resident in the Indian Territory and Texas, also throughout that stretch of country extending to Sonora and Southern and Lower California; and a third called "scutulatus," known only to Arizona. We had in view, in the first place, to test the question as to whether the blood of animals killed by rattlesnake poison had lost any of its germicidal power. We used Dr. Weir Mitchell's noose for securing the snake and with a sterilised saucer thrust into the mouth of the animal we collected the venom. In this way we had no difficulty in getting from 0·5 to 1 c.c. of nearly clear, slightly straw-coloured fluid, quite sufficient for our purposes. This was diluted with an equal quantity of sterilised physiological salt solution, and from 0·25 to 0·5 c.c. of this mixture was inoculated subcutaneously under antiseptic precautions, the dose varying according to the time we wished the animal to live. This was usually from one-half to one hour and a half, though in one or two cases it was three hours after the injection. The injections were in all cases given subcutaneously, sometimes beneath the skin of the abdomen and at other times in the groin. The lesions differed somewhat, according to the site of injection; when made beneath the skin of the abdomen there were most extensive peritoneal hæmorrhages, whereas, when the injections were made in the thigh, these lesions were less extensive, although not absent; here the most striking effects noted, beside the deeply discoloured integument surrounding the point of injection, were the underlying hæmorrhages into the muscles. The important lesions were briefly these: most extensive hæmorrhage with disintegration of tissue and actual necrosis of tissue for a wide distance around the point of inoculation, with ecchymoses in other parts of the body, particularly in the serous membranes. Another point which served our purpose admirably is that the blood does not coagulate after death, or coagulates only feebly and after a long interval. We therefore had no difficulty in collecting a sufficient amount of the fluid blood, and we did so by withdrawing the blood in less than a minute after the animal had breathed its last. We exposed the heart at once, and with sterilised instruments made an incision in the right auricle, and with a sterilised pipette we aspirated from the right heart, and then, passing the pipette down into the abdominal vena cava, we secured sometimes as much as 7 or 8 c.c. of blood. This blood was collected in a sterilised test-tube and put in the refrigerator. After twenty-four hours the red blood-corpuscles had settled, sometimes a small, soft, dark coagulum had formed, and there was a layer of clear serum.

The usual statement is that the blood does not coagulate. It looks as if it did not coagulate, and as though there was merely a sedimentation. But there is, in fact, an extremely thin clot, which does not retract from the sides of the test-tube. It is an extremely viscid, sticky coagulum, which adheres to the platinum needle inserted into it. We pipetted off after twenty-four hours the clear serum, usually collecting from 0·5 to 1·5 c.c. The organisms which were used to test the germicidal powers of the serum were the bacillus coli communis and the bacillus anthracis. Professor Welch selected the bacillus coli communis because that is an organism which is normally present in the intestine, and also one with which he had experimented upon with normal serum. He took the bacillus anthracis because that is a classic organism in regard to the action of serum. The results were uniform and striking. As a rule, we made a control experiment with normal serum; thus, we killed a healthy rabbit and withdrew the serum in the same way, collected the same quantity and inoculated, at the same time as a parallel control, tubes with the bacteria to be tested. The cultures were from twenty-four to forty-eight hour cultures. Our bacilli anthracis were obtained in suspension from the spleen of an animal which had recently died from anthrax. We wished to obtain the anthrax bacillus free from spores, and thought it better to take it fresh from the animal. Similar results were obtained also with twenty-four hour anthrax cultures, grown at room temperature. We made a suspension in salt solution of the organisms and inoculated a known quantity, one to two platinum loops of the suspension, into the serum tube. Then we made roll cultures.

The following tables, drawn up by Professor Welch, represent only a certain number of our experiments, and are much abbreviated for the sake of clearness:—

TABLE I. *Bacillus Anthracis: Normal Serum.*

No.	Number of bacilli inoculated.	After twenty-four hours.	After one week.
1A	485	0	0
1B	8512	0	0
1C	210	0	0
2A	5292	0	0
2B	1628	0	0

TABLE II. *Bacillus Anthracis: Venom Serum.*

No.	Number of bacilli inoculated.	After eighteen hours.	After twenty-four hours.
1A	8512	Countless	0
1B	25	0	3233
2	68	0	250,000
3	3292	Countless	0
4	3292	Countless	0
5	3292	Countless	0

TABLE III.—*Bacillus Coli Communis: Normal Serum.*

No.	No. of bacilli inoculated.	Immediately.	After twenty-four hours.	After forty-eight hours.	After one week.
1A	250,000	256	157	Countless	Countless
1B	175,000	188	50	Countless	Countless
2A	29,161	53	0	0	0
2B	3,150	18	0	0	0
3	9,990	13	38	625	Countless
4	84,947	238	0	0	0

TABLE IV.—*Bacillus Coli Communis: Venom Serum.*

No.	No. of bacilli inoculated.	Immediately.	After twenty-two hours.
1	800,000	1,077	Countless
2	3,150	6	26,000
3	16,560	32	Countless
4	9,990	35	Countless
5	84,947	284	Countless
6	84,947	231	Countless
7	84,947	182	Countless

With the bacillus coli communis it will be observed that in the case of normal serum we inoculated 250,000 bacteria. Immediately afterwards there were 256 colonies. After twenty-four hours only 157 colonies. In other words, there was not only no development but an actual diminution in the number of bacteria. If the organisms are not all killed at the end of twenty-four hours the germicidal power ceases, and those which remain multiply. After forty-eight hours the colonies were countless. In the second experiment we inoculated 175,000 bacteria, which represented 188 colonies immediately. After twenty-four hours there were only 30 colonies, and in forty-eight hours they were countless. Taking a smaller number of bacteria, 29,161, there were immediately 53 colonies, after twenty-four hours none, after forty-eight hours none, after one week none. In other words, in twenty-four hours the normal serum had destroyed 29,000 bacteria. These experiments were uniform in results, and point to one conclusion, that the blood of rabbits killed in one-half to three hours after subcutaneous inoculation with rattlesnake venom has lost its germicidal power. This is of considerable interest, for it is an indication of a very profound alteration in the blood. This germicidal power of the blood is one of very great significance, on which many of the modern theories of immunity depend. It is of special interest to ascertain under what conditions the germicidal properties of the normal blood serum are at their highest, and in what way these properties affect the composition of the blood. The principal workers in this field have been von Fodor, Nuttall, Wassermann, Kitasato, Buchner, Ogata, Hankin, and others. Von Fodor's work had reference to the composition of the blood, and was intended to show that arterial has a more destructive action on bacteria than venous blood, and also that fresh blood has a more destructive action than that which has been standing for some time. It was also found that the germicidal power of the blood was weakened in an atmosphere of oxygen or carbonic acid gas, but the removal of gases from the blood had no appreciable effect. A series of experiments showing the effect of moving and stationary blood upon bacteria by means of small globes containing blood, some of which were kept in constant motion and others quite stationary, resulted in no appreciable difference being observed. Temperature affected very materially the bactericidal power of the blood, which increased with the rise of temperature from 38° to 40° C., and then gradually diminished with the fall. Von Fodor is of the opinion that the individual predisposition of an animal to an infectious disease stands in close relationship with the germicidal power of the blood. A second series related to the influence of drugs on the power of blood to destroy germs. Hydrochloric acid had no effect; tartaric acid and quinine respectively produced a marked decrease. A slight increase was produced by common salt and carbonate of ammonium, but a more marked effect by the phosphate of sodium, while the carbonate of potassium and sodium showed a very remarkable increase. From these experiments the deduction was made that the bactericidal power of the organism was raised by any drug which increased the alkalinity of the blood. The third series verified the conclusions regarding the alkalisation of the blood. Of eight rabbits inoculated with anthrax all died, whilst of nineteen which had been previously injected with solution of soda only three died. A majority of the sixteen remaining were perfectly free from disease, only a few being fatally affected. Up to this time, however, the doctrine of phagocytosis as advanced by Metchnikoff held sway, when Nuttall struck the first severe blow to this theory. He, in his most excellent inaugural dissertation at Göttingen in 1890, showed that the destruction of virulent bacteria in the blood of animals by the leucocytes was not at all essential, but that the serum of blood free from all cellular elements possessed this power to a degree equal to the blood in its entirety. Nuttall's work is graphically shown in some twenty-eight tables in his "Beiträge zur Kenntniss der Immunität." He here proves very conclusively that in the blood bacteria presented marked evidences of degeneration before being taken up by the wandering cells or leucocytes. It was also seen that the bactericidal power of the blood of different animals varied, and that while in some certain bacteria were promptly killed, in others these were simply restrained for a time or not affected. Buchner, Lubarsch, Nissen, Stern, and Prudden have practically verified these observations. Buchner particularly, in his experiments upon dogs and rabbits, verified the findings of Nuttall; but went even further, and proved that the bactericidal power of the blood of these animals did not at all depend upon the cellular elements, but resided in the clear serum which separated from the clot after the blood had stood awhile in a cool place. He also demonstrated that the germicidal action of blood and serum was destroyed by exposure for an hour to 55° C., or by heating to 52° C. for six hours or to 45·6° C. for twenty hours. Alternate freezing and thawing did not destroy the bactericidal power of serum, but it was diminished or completely checked by dialysis with distilled water, or by extreme dilution with the same. He preserved the antibacterial action of the serum by making an equal dilution with a 0·6 to 0·7 per cent. of sodium chloride solution, and was led to believe that the activity of the serum was greater alone than when the cellular elements of the blood were present; hence he concluded that the active element is a living albumen, having as an essential constituent an alkaline base. This albuminoid substance is thought by Hankin to be identical with his "globulin," isolated from the spleen and lymphatic glands. According to the views of these experimenters the germicidal power of the blood resides in the serum alone and phagocytosis is but a secondary process, the leucocytes taking up the bacteria only after they have been rendered inert by the germicidal power of the serum of the blood and certain other fluids of the body. For our purpose, however, it is not necessary to insist upon the humoral as opposed to the phagocytic doctrine of immunity. All that concerns us is the recognition of the bactericidal power of the blood serum under certain conditions. The loss of this normal germicidal power helps us to explain the varying rapidity with which post-mortem decomposition sets in. It is well known that the bodies of persons who have died from different diseases decompose with varying degrees of rapidity. We cannot explain this differing rapidity of decomposition simply by variations in temperature, for under the same external conditions one body will be decomposed in comparatively a few hours and another may remain undecomposed for several days. We selected the animals killed with rattlesnake venom because it is well known that they decompose with great rapidity. The bodies of human beings killed by snake venom are also said to decompose with great rapidity.

The results of our experiments furnish a satisfactory explanation of this phenomenon. The blood at the time of death, and even before death, has lost all, or nearly all, power of resisting the invasion and multiplication of certain bacteria, so that the bacteria of putrefaction, which are normally present in the intestine develop with astonishing rapidity, and even before the animal is cold produce this wonderful rapid decomposition. Our experiments are also suggestive as regards certain secondary and mixed infections. The toxic proteids of snake venom belong to the same class of poisons as those formed by toxic bacteria, such as the bacillus of tetanus, of diphtheria, &c. It is easy to suppose that these infectious diseases may cause a diminution of the germicidal power of the blood against secondary invaders, of which common examples are the pyogenic bacteria present often in our mouths and intestinal canals, and which, in an individual whose resistance is lowered by a loss of the germicidal power of the blood, may grow and multiply. In other words, we can understand better the causation of many of these secondary infections.

THE report of the Paddington Provident Dispensary for 1893 states that while the number of new members shows an increase, the total number of members is smaller than in the previous year. The subscriptions and donations also show a considerable falling-off as compared with those of last year.

FUNCTIONAL PYREXIA IN CHILDREN.

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THE liability of the temperature in children to undergo extensive fluctuations from little or no apparent cause is an everyday fact and an everyday difficulty that leads most medical men at one time or another into errors of diagnosis. That obscure pyrexial attacks are in some way correlated with the nervous instability of childhood is also a well-recognised fact; but hitherto no attempt, so far as I am aware, has been made to define the relation, beyond a tentative suggestion of some disturbance of thermotaxis.[1] It has been proved, both by experimental and clinical observation,[2] that organic lesions of the cortex of the brain have a marked effect upon the body temperature, and hence it has been concluded that the cortex exercises some thermotaxic function whereby it controls the thermolytic and the thermogenic centres in the medulla and corpus striatum. It has not been found possible to localise such function to any particular area, the lesions producing the thermal disturbance being limited to the cortex, but not to any particular area of the cortex. It will be assumed for the purposes of the theory here propounded that this view is correct, and I think the ease with which the theory adapts itself to the facts will afford at least some evidence in favour of the assumption. Now the idea of disturbance without organic lesion, the so-called "functional" disturbance of cortical processes, alike of those that have been definitely localised and of those whose position is as yet only conjectured, is familiar enough and accepted by all. Few would deny that epilepsy, infantile convulsions, hysteria, and some forms of insanity are manifestations of functional cortical disturbance; chorea may be more doubtful in pathology, but, as Dr. Gowers says, "we can hardly resist the conclusion that the cortical motor cells are deranged in function" in chorea. If the motor, the sensory, and the psychical functions of the cortex may be disturbed, as we know they are in the above-mentioned neuroses, without any demonstrable organic lesion, we should expect *a priori* that the thermotaxic function also would be liable to similar functional disturbance. Since, however, the thermotaxic mechanism would seem, like the psychical, to be rather diffuse than localised, one would expect that a disturbance, involving, say, the motor areas, would sometimes, if the thermotaxic mechanism be liable to functional disturbance, also disturb the adjacent thermotaxic processes. If, then, we found that it was not uncommon for the above neuroses to be associated with disturbance of temperature, the probability of functional derangement of cortical thermotaxis would be increased.

I have not thougnt it necessary to lengthen this paper by detailed cases showing this, but merely submit the following facts: 1. In epilepsy it is not uncommon to find the temperature elevated during the fit and rising for a few hours after the fit—e.g., to 102° F.—then falling in a few hours to normal and there remaining. 2 Infantile convulsions are commonly associated with rise of temperature (I say "associated with" advisedly, as will be seen hereafter), and this rise of temperature is usually sudden and lasts only a few hours. 3. Chorea: the occasional occurrence of pyrexia of hitherto unexplained origin is noted by Dr. Gowers.[3] 4. Hysteria: the pyrexia of hysteria is, of course, well recognised. 5. Migraine: a rise of temperature during the attack is not uncommon. 6. Insanity: here it is difficult to say how far minute structural changes may cause the rise of temperature, but certainly in some forms of mania occurring occasionally in children, in which no post-mortem changes are found in the brain, irregular and hitherto unexplained pyrexia occurs. It seems only reasonable to conclude from such cases, in which there is no obvious cause otherwise for pyrexia, and in which the primary disturbance is by general consent limited to the cortex, that the same functional disturbance which affects the motor, sensory, or psychical mechanisms, affects also the thermotaxic mechanism of the cortex. The objection that the rise of temperature may be due to muscular activity in those cases in which it is associated with functional motor disturbance—e.g., epilepsy, convulsions, &c.—is negatived by the following considerations: it is absent in some cases in which the muscular activity is extreme; when present it is not proportionate to the muscular activity; and, lastly, it is too great to be accounted for thus.

Here, then, we have instances of functional pyrexia associated with other functional neuroses, and it is worthy of note in reference to such cases that the pyrexia usually is proportionate in rapidity of onset and in length of duration to its accompanying neurosis. Thermotaxis being liable to functional derangement, together with the other functions of the cortex, it seems but reasonable to suppose that as the motor, the sensory, or the psychical processes in the cortex may each be separately affected by functional disturbance, so also the thermotaxic may sometimes be the only process involved. The following headings will show the type of case which I would explain thus:—1. Sudden and short pyrexial attacks occurring in the first dentition, with no other cause found—e.g., infant in apparently perfect health, teething, has sudden rise of temperature to 102° or 103°; a few hours later the temperature is normal, and remains so. 2 Similar pyrexia in older children (usually under five years old)—e.g., a boy aged three years, perfectly well at midday; at 6 P.M. complained of headache, and vomited; temperature 103·4°; next morning temperature normal and child perfectly well. 3. A still more evanescent pyrexia, familiar enough in the out-patient department of a children's hospital—e.g., child aged six has temperature of 102° in the out-patient room; two hours later, in the ward, his temperature is normal, and continues so. A similar rise of temperature is often observed in hospital wards just after visiting hours. 4. Prolonged and very irregular pyrexia often associated with little or no constitutional disturbance, occurring mostly in children of "neurotic" type, sometimes in children who are mentally deficient; no explanation hitherto found; age, from completion of first dentition onwards. 5. Prolonged, irregular, often intermittent pyrexia, lasting days, or even weeks, during first dentition. The first three would on this theory be classed with epilepsy and infantile convulsions, as paroxysmal neuroses; the last two with chorea and hysteria, as more prolonged functional disturbances. It will be observed that in (1) always, and in (2) often (as in one of my own cases quoted) there is an obvious peripheral irritant—dentition in (1) and indigestion &c. in (2). Thus the resemblance to epilepsy and infantile convulsions, in which there is so often some peripheral determining cause, becomes closer; and when it is considered how often, under similar conditions, the paroxysmal pyrexia may be replaced by convulsions or epilepsy, the cortical origin of the pyrexia will, I think, seem at least probable. And here I should like to suggest that the relation of pyrexia to infantile convulsions is not generally causal, as has been supposed; either may precede or follow the other, or they may as often occur together, both being manifestations of functional disturbance of the cortex.

From the foregoing considerations we can discriminate two forms of what might be called "functional ataxic pyrexia"—viz., a paroxysmal and a prolonged; and either of these may, as we have seen, occur either in association with other functional disturbance of the cortex or as an isolated phenomenon. The condition when occurring as an isolated phenomenon is limited almost exclusively to children, and this is exactly what one would expect when one considers how unstable is the cortex in all its functions in the child; a pin-prick may start a convulsion, the most trivial event may cause wild excitement—why should not the thermotaxic function be equally easily upset? But, if this is so, increasing age, with its increasing stability of cortical equilibrium, should diminish the tendency to such disturbance. That it does so is surely the common clinical experience of all. In looking over the notes of collected cases of functional pyrexia,[4] I find that the large majority are under five years old; after that age the number decreases markedly, and that of the few cases that occur over the age of fifteen almost everyone has in it some obvious "neurotic" element—e.g., hysterical or "neurotic" disposition. With regard to the important question (important rather for prognosis than for treatment) of distinguishing functional from what, for lack of better term, I will call symptomatic pyrexia, the functional, when it occurs as an isolated phenomenon, must, I fear, be recognised by negative rather than by positive

[1] MacAlister: Goulstonian Lecture, 1887. Hale White: American Journal of Medical Sciences, November, 1890.
[2] Hale White: Journal of Physiology, vol. xii., No. 3. International Clinic, vol. iii., series 1.
[3] Nervous System vol. ii., p. 602

[4] I am indebted to the acting superintendent of Guy's Hospital, Dr. Shaw, for kind permission to collect observations from the hospital cases.

signs—i.e., by excluding other causes. As a general rule the younger the child, and the more "neurotic" the disposition, the more likely is the pyrexia to be functional. But in the prolonged form there are certain characteristics which occasionally help to distinguish it: (1) extreme irregularity of temperature, rapid alternations of high and low; (2) fluctuations of temperature not agreeing in time with the usual diurnal maximum and minimum; and (3) absence often of the constitutional disturbance which would be associated with an equally prolonged symptomatic pyrexia. The pyrexia of dentition often illustrates these points well, and further shows the influence of age in the much greater frequency of its occurrence in the first dentition than in the second.

In conclusion I should like to point out that, while I believe many of the obscure pyrexial attacks of childhood to be rightly explained only by the above theory, I do not in the least wish to call every pyrexial attack for which no cause is found an instance of functional ataxic pyrexia; many remain, and always will remain, clinical mysteries, which doubtless would often be solved if the subsequent histories could be traced, or the connexion proved with those old pleuritic adhesions, those calcified glands, or those fibroid patches in the lung which are so often found post mortem, the only record of unsuspected disease in bygone years.

Wray-crescent, Tollington-park, N.

THREE CASES OF ANEURYSM TREATED BY VENESECTION.

BY JAMES T. R. DAVISON, M.D. EDIN.,

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BLEEDING in the treatment of aneurysm is a measure which, in the present day, is discredited. This is due to the abuse to which the mode of treatment was carried in days gone by. That bleeding judiciously employed is a most valuable element in the treatment of aneurysm the following cases appear to me to testify.

CASE 1.—A man forty years of age, without syphilitic or alcoholic antecedents, had been for a year subject to fatigue on undergoing certain exertions, when, in June, 1891, while on a voyage to Europe and in the act of playing cards, he was seized with a sudden attack of dyspnœa, which ended in loss of consciousness. Three days afterwards he landed in Spain, where he remained a fortnight, during which time he had several attacks of dyspnœa, but only once lost consciousness. He afterwards went to Paris, where he consulted a physician, who diagnosed a cardiac affection due to smoking, and advised him to go to Bourboule and take there the arsenical waters. He remained at Bourboule a month, during which time he was free from his former attacks. He then returned to Paris, where he sought the advice of Dr. Potain. This physician diagnosed dilatation of the aorta and insufficiency of the aortic valves, and ordered him, internally, iodide of sodium and some external applications. He remained in Paris five months free from his attacks. Subsequently he returned to Spain, when he was again seized with paroxysms of dyspnœa. After sojourning three months in that country he returned to Buenos Ayres. During the voyage he had no attacks, but on arriving here the paroxysms of dyspnœa returned again. As the result of a consultation which was held on his behalf he was put upon an absolute milk diet. After this he became considerably worse. On June 10th and 11th, 1893, he had several attacks. On the 12th I was asked to see him in consultation with other colleagues. I diagnosed aneurysm of the aorta, compressing the recurrent laryngeal nerve, and advised amongst other things suppression of the absolute milk diet and an extraction of blood from his arm. That same evening he had a very severe attack. When I arrived at his house, accompanied by one of his medical attendants, I found him with loss of consciousness and great difficulty of breathing, his face was cyanotic, and his pulse had a high tension. In the confusion of the moment a member of the family had administered one or two hypodermic injections of morphia. Then and there we bled him from his arm, taking away thirty ounces of blood. His breathing then became easier, the cyanotic hue of his face began to disappear, the high tension of his pulse fell, and when he regained consciousness he found himself without fatigue, and without fatigue he has remained until this day—a period of nine months. He now feels perfectly well, and is about to make a voyage of pleasure to Europe. The medicinal treatment to which his medical attendants subjected him all this time has been the administration of iodide of sodium three weeks each month, and a cantharides blister over the aneurysm continually, as recommended by Dr. Potain. I had an opportunity of examining the patient nine months after he was bled—and the following was his condition then: the pulse was regular, strong, rather full, and very difficult of compression; the cardiac impulse was strong and pushing; the apex beat was in the sixth interspace, about one inch outside the mammillary line; there was longitudinal dulness; resonance was impaired at the fourth rib; at that level there was no increase of transverse dulness. Mitral area: the first sound was of low pitch and strong intensity; a weak blowing murmur replaced the second sound. Tricuspid area: the first sound was normal; the second sound was replaced by a weak blowing murmur. In the aortic and pulmonary areas the first sound was weak, the second being replaced by a weak blowing murmur. There was no accentuation of the second sound anywhere. On the right side, over the inner part (about two inches) of the first rib, the first interspace, and the second rib, the resonant note on percussion was manifestly impaired; over this area a pulsation was seen and felt. Here also the two sounds of the heart were heard, but they were weak, and the second was also impure. Pressing behind the manubrium sterni a pulsation was felt, though low down. The sign known as the "tracheal tug" was felt very distinctly. Behind, the respiration over the left interscapular space was less distinct than on the corresponding right side; the percussion note was there resonant.

In this case the position occupied by the pulsating area points to aneurysm of the innominate artery and ascending aorta; the tracheal tug and the diminution of respiration over the left interscapular space point also to dilatation of the transverse arch. The first aneurysm would be in a position capable of compressing the right pneumogastric just before it gave off the recurrent laryngeal, and the second would press the left recurrent laryngeal. The attacks might then have been due to dilatation of one or both aneurysms. The weakness of the first sound at the base, the absence of the second, and its replacement by a weak blowing murmur, when elsewhere there is evidence of a large heart pulsating strongly, indicate that the first aneurysm has removed somewhat the base of the heart from the anterior wall of the thorax. The weakness of both sounds over the aneurysmal space, in spite of the energetic action of a hypertrophied heart, indicates that the medium between the internal part of the aneurysm and the chest wall is not favourable for the conduction of sound; in other words, it presumes that coagulation has taken place within the sac, and that possibly also the walls have undergone thickening. This case illustrates well the benefit of bleeding in the treatment of aneurysms. Here, as a result of this measure, the aneurysm or aneurysms contracted; thereby the symptoms of compression were relieved and the aneurysms were placed under more favourable conditions for the operation of other therapeutic means destined to consolidate them. The aortic insufficiency in this case was of no moment, as compensation was established.

CASE 2.—This case was that of a patient forty-four years of age, who about the month of January, 1893, began to notice that, after undergoing any slight exertion or annoyance, both sides of his neck swelled. On one of these occasions, while looking at himself in a mirror, he found that his face was purple and swollen. He stated that about the same time he began to feel some uneasiness in swallowing. In the month of August he began to feel great pain over the left hypochondrium, both shoulders, and back. In September his right arm began to swell. He never complained of fatigue and slept well on either side when he had no pains. This patient has had syphilis and up to four years ago had suffered from asthma for twenty years. Four years ago he had influenza and pneumonia, and since then his asthma disappeared. I saw this patient in consultation on Oct. 23rd, 1893. His face was then purplish-blue, his neck and right arm being very swollen. I advised that he should be bled, and on the same day twenty-seven ounces of blood were taken from both arms. At the end of the operation he fainted, but was immediately brought to by slapping a wet towel on his face. The effects of the bleeding were very marked. The pains disappeared immediately, and next day the swelling of the arm and neck

had to a great extent disappeared. This patient, owing to his personal affairs, could not undergo proper treatment. A month after the bleeding he was obliged to be up and doing, and has had daily to mount several flights of stairs in different houses. He also at first was unable to take iodide of potassium except for a short time, and in very small doses. The last two months he has begun to take iodide again. In spite of the unfavourable circumstances for treatment in which this patient was placed, five months after the bleeding he was a different man altogether. His right arm has lost its swelling, his face has lost its purple colour, and the swelling of the neck has greatly diminished. Three months after the bleeding pain came on over the aneurysm; this pain he has had to combat with other means. An examination made on Jan. 30th, 1894, gave the following signs:—Examined after dinner: pulse regular, strong, normal size, inclined to be incompressible; right one appears somewhat less than left. Heart impulse not felt (he is a small, stout man). Cardiac beat not discernible. Longitudinal dulness at fourth rib. In mitral and tricuspid areas sounds were normal. In aortic and pulmonary areas the first sound was normal, the second somewhat accentuated. There is dulness at the inner part of the second right interspace, and loss of resonance over the corresponding upper and lower ribs. Pulsation was felt over the inner part of the right second interspace; over this area was heard a systolic murmur (not very distinguishable as a murmur) and a well-accentuated second sound. There was fulness over the right supra-clavicular space. The external jugular vein (right) was full. The superficial veins of the upper part of the chest in front were dilated, especially the right side. In this case there appeared to be an aneurysm of the ascending aorta and innominate artery, compressing the innominate veins, especially the right, and compressing somewnat the right subclavian artery; also some dilatation of the transverse arch, affecting the œsophagus. Had this patient been in a position to undergo a thorough treatment probably the good effects produced would have been much greater; as it was, the relief of compression of the innominate veins was very marked.

CASE 3.—The patient in this case was seen by me in June, 1891. He then had impairment of resonance or percussion over the sternal end of the left first interspace, and over this area there was visible pulsation. The second sound at base was of a thumping character, and over the pulsating area the same character of the sound was present. The tracheal tug was well marked. The right radial pulse was almost imperceptible. His symptoms were coldness of right arm, pain over the præcordia and corresponding right side, pain and difficulty in swallowing liquids, and hoarseness of voice. He had had buboes six years ago, left hemiplegia four years ago, lasting three weeks, and was operated on for popliteal aneurysm three years ago. This case, which appears to be one of aneurysms of the ascending and transverse aorta, was under treatment for several months with marked benefit to his symptoms. Eighteen months after I first saw him he had an attack of sneezing, which was followed by inability to swallow solids; when he swallowed liquids a gurgling noise was heard at a distance from him. At the same time his pains became worse. I bled him from the arm, and immediately the difficulty of swallowing and the pains disappeared. This patient, who continually took iodide of potassium, went on pretty well for another year, when after another fit of sneezing he felt as "if he had been shot," the pain being so intense that he could not speak for two or three minutes; after two or three days he again had difficulty in swallowing. I took twenty-five ounces of blood from his arm. This time the symptoms abated, but only after a few days. This was about four months ago. I saw him again last week; he is going about pretty free from symptoms, but on examination I find that the aneurysm of the transverse arch is larger than it was in 1891, for now the respiration of the left lung is less than on the right side, showing that the left bronchus is being invaded.

In this case the relief from symptoms of compression was immediate and very marked after the first bleeding. The effects after the second bleeding were less marked, but a whole year had elapsed, and in this interval the evolutionary changes in such an aneurysmal diathesis which were taking place must have destroyed in a great measure the contractile elements of the sac.

Bleeding in the treatment of aneurysm is no innovation. It was, even according to Dr. Balfour,[1] suggested by Hippocrates, and it formed the basis of the celebrated treatment of Valsalva—a treatment which fell into discredit owing to the abuse of bleeding which it advised and because, at the same time that it tended to consolidate the aneurysm, it also tended to prevent this consolidation. Medical literature presents cases where spontaneous rupture of aneurysms has been followed by contraction of the sac, relief of symptoms of compression, healing of ruptured wound, and apparent prolongation of life. If such benefit can follow the spontaneous rupture of an aneurysm may not the same benefit be obtained by the harmless extraction of blood from a vein? The abuse of a remedy is not a sufficient cause for excluding its legitimate use, nor must the intelligent physician be bound by the fashion of the day, which at one time decrees abuse of bleeding and at another time its total rejection.

The dilatation of an aneurysm is produced by the pressure of the blood stretching its coats weakened by disease. If these coats retain contractile elements, it is evident that a diminution of the volume of blood within the aneurysm, together with a diminution of the pressure of the blood if carried to a sufficient extent, will enable the aneurysm to contract; but the lowering of blood pressure after hæmorrhage is only temporary, and after a short time this pressure regains its former force. Does it, then, follow that conjointly with the return of the force of the blood pressure the aneurysm will again dilate to its former extent, and thus bleeding come to be of no value? Certainly not, for in order that the aneurysm may return to its former degree of dilatation it is necessary either that in a few days changes shall take place within its walls, lessening their power of resistance, or that the blood pressure shall attain to a degree which it had not reached before; for if, before, a certain amount of blood pressure was necessary to keep the aneurysm in its over-distended state, now that it has contracted, to keep it again stretched as before, would require the same amount of blood pressure that maintained it distended, *plus* another quantity necessary to overcome the contractility of the walls now contracted, and therefore in more favourable conditions to overcome resistance. It follows, therefore, that when the walls of an aneurysm retain a sufficient quantity of contractile elements the contraction which will take place on lessening the volume and the pressure of the blood, after a good bleeding, may, with judicious care, be maintained, even after the blood pressure has regained its former strength. In the treatment of aneurysms three principles must be kept in view—the contraction of the aneurysm, the hypertrophy of its walls, and lastly the deposition of fibrin within its cavity. The first indication can be carried out by a copious depletion, together with absolute rest for several months and the ingestion of but a limited amount of liquids. The second indication can be carried out by the internal administration of iodide of potassium, as recommended by Dr. Balfour, avoiding excessive doses, which may accelerate the pulse. The third indication requires, in addition to the above measures, a diet which, without being very rich to stimulate unduly the circulation, will at the same time be nutritive enough to produce a sufficient quantity of fibrin. The principle which I advocate here in the treatment of aneurysms is not the impoverishment of the blood, but the temporary diminution of its volume and of its pressure, so as to enable the aneurysm to contract and place it thus under circumstances more favourable for the operation of other remedial agents which tend towards its consolidation. Repeated bleedings at short intervals have been known to be positively harmful; but keeping in mind the above principle the intelligence of the physician will indicate when and how to bleed. Judicious bleeding in the treatment of aneurysms will prove to be a valuable element, by means of which alarming symptoms of compression may be quickly removed, instant death sometimes averted, and the patient placed under favourable conditions for the prolongation of his life.

Buenos Ayres.

[1] Diseases of the Heart, first edition, p. 364.

THE committee of the Gipsy Hill and Upper Norwood Dispensary in their twenty-sixth annual report call attention to the large falling-off in subscriptions for the year 1893.

MR. ALEXANDER WYNTER BLYTH, who has held the post of medical officer of health for the vestry of St. Marylebone during the past fourteen years, is to be presented by that body with a public testimonial to the services that he has rendered to the parish during the late epidemic of scarlet fever and diphtheria.

THE MORTALITY UNDER THE CÆSAREAN OPERATION IN GREAT BRITAIN DURING THE LAST EIGHT YEARS;

AND THE ENCOURAGEMENT OFFERED FOR THE INTRODUCTION OF SYMPHYSIOTOMY AS A SUBSTITUTE FOR CRANIOTOMY.

BY ROBERT P. HARRIS, A.M., M.D.

BEFORE discussing the relative merits of these two operations and their risks respectively, it may be well to consult the British records of the former for the period since the improved method of performing it was in a measure introduced in 1886, as there is evidently in London a prevailing error as to what has been accomplished in the saving of life in Great Britain. When we look back to the early record of Dr. Thomas Radford, with its 84 per cent. of maternal deaths, and compare it with the results of cases we have recently collected, we find much ground for encouragement, although it is evident that much more might be accomplished in reducing the death-rate. The Cæsarean operation early performed, or done before labour, upon a good subject, has a much lower rate of mortality than when the woman has been exhausted by a long labour, and especially where the numerous attempts have failed to deliver under the forceps, version, or craniotomy. When we group together all of the cases recorded for a given country and state how many died and how many recovered we get a very imperfect idea of the danger of the operation *per se*. We have a general knowledge of the risk, but what we require to look into and know is why one died and another did not; and it is the acting out of this knowledge that will eventually reduce the death-rate to a moderate percentage. If men had less fear of the operation it would be undertaken in good season and result in fewer deaths. In order to find what has been the amount of loss in England and Scotland since Nov. 1st, 1886, we made a careful search for all of the published cases and obtained the following—viz: for London, 22 operations—women died, 9; children lost, 5. For Glasgow, 32 operations—women died, 5; children lost, (?) [1] For the provincial towns, 6 cases—women died, 5; children lost, 3; making a total of 60 operations with 41 recoveries and (?)[1] children saved, a mortality of nearly 32 per cent. of the cases, London losing 40 per cent. Not being able to obtain the unpublished operations we have failed to give a full list, but the proportion would not probably be materially altered. Our record, published and not published, for the United States, commencing with 1882—the year the improved operation was introduced—now shows 100 operations with 38 deaths. Out of the first 50 24 died, and of the second 50 14 died. There were 16 operations in 1893 with 4 deaths. This shows that there is no difference in the results of the two countries; both are far from creditable and might be made much more so. Our cities should at least do much better, and try to make some approach towards the successes of Leipzig and Dresden. Philadelphia has made a step forward by saving 13 women and 14 children under her last 16 operations; 2 of the 3 deaths were in cases having very unfavourable prognoses. When we come to examine the dangers and results of symphysiotomy, where it has been carefully and thoroughly tested, we find a more encouraging record. Prof. Paul Zweifel of Leipzig has given both operations an extended trial, with the following results: by the Cæsarean operation he lost the fourteenth and twentieth cases out of a total of 30; and under 23 symphysiotomies he lost 2 children, but no woman. We know of no fairer comparative test than this, as the same operator made both trials. We have had 44 symphysiotomies in the United States, with a loss of 5 women and 11 children, 5 of the latter having been already dead before the operation. Compare this with our last 44 Cæsarean sections, and we find: women lost 12, and children lost 12. Mortality of women under symphysiotomy, $11\frac{4}{11}$ per cent., and under the Cæsarean section, $27\frac{3}{11}$ per cent., or more than double. A great deal has been said about the disabilities produced by symphysiotomy, but we have found very little of any form here. As the children delivered in our country under this operation have averaged 8 lb, we propose to limit the conjugata vera to $2\frac{3}{4}$ in. The Italian subosseous method we believe to be the best form of operation. In primipara the Neapolitan operators secure safety to the soft parts by letting the woman in many cases deliver herself. At one time three out of four women were left to nature after the section; but now delivery by the forceps is much more common. With proper care there should seldom be any strain upon the pelvis or injury to the vagina or bladder. Women have in a number of instances been operated upon twice, and one subject in Philadelphia has been delivered of living children, once by the Cæsarean operation and twice by symphysiotomy. She would not consent to any sterilising method being made use of. The last 28 symphysiotomies in the United States proved fatal to but two women, or $7\frac{1}{2}$ per cent. It will be a long time before the Cæsarean operation can accomplish this, in either England or America. When we can average 15 per cent. we may feel encouraged. Single operators like Prof. Cameron may save 90 per cent.; but in general practice we do not expect so low a death-rate as one in ten.

Philadelphia.

[1] We have not the results as to the children in 20 of Professor Murdoch Cameron's cases; under the other 40 operations there were 9 lost.

A SUGGESTION FOR INCREASING THE POPULARITY AND EFFICIENCY OF VACCINATION.

BY G. E. YARROW, M.D. HEIDELB., L.R.C.P., D.P.H. LOND., &c.,

MEDICAL OFFICER OF HEALTH FOR ST. LUKE, MIDDLESEX, AND SURGEON ACCOUCHEUR AND LECTURER ON MIDWIFERY TO THE CITY OF LONDON LYING IN HOSPITAL.

AT a time when small-pox is beginning again to manifest itself throughout the country the attention of those engaged in the practice of preventive medicine is naturally directed to a consideration of the means at their command to avert as much as possible so formidable a disease becoming epidemic, to try to discover the weaknesses (if any) which exist in connexion with such means, and to consider in what direction they may be strengthened. Imbued with these views, and with no desire to be dictatorial, I venture to assert: First, that vaccination has from various causes become most unpopular, and its unpopularity is daily increasing, particularly amongst the lower middle and lower classes. Secondly, that the bulk of the vaccination now performed (in London at least) is most inefficient, as far as its value from a protective point of view is concerned, this latter defect depending almost wholly upon the first; and I am sanguine enough to believe that if these defects can be remedied the compulsory clauses of the Vaccination Act will be no longer necessary, and another stumbling-block in the way of its acceptance as a beneficent measure will be removed. The remedy, I venture to suggest, is to allow every registered practitioner to vaccinate and claim through the sanitary authority a fee of 2*s.* 6*d.* for each certificate of successful vaccination furnished to the said authority, as is now the practice in regard to the notification of infectious diseases. The certificate should specify the number of separate insertions of lymph or area over which the effect is produced, and, a standard being fixed, only such results as reached the standard should be regarded as efficient vaccination to be paid for by the sanitary authority. Of course this will necessitate an increased amount of supervision, to which honourable medical practitioners surely will not object, and the unscrupulous need not have much consideration bestowed upon them. I would further remind those likely to object that at the present time when a vacancy occurs in the office of public vaccinator there is no lack of candidates, and one never yet heard of the objection being raised by an aspirant for the post to his work being under the supervision of an inspector of the Local Government Board. I believe that if vaccination were performed under the conditions I propose it would be regarded more in the light of a public duty than it is at present, bringing in its train, amongst other responsibilities, the liability to the work being inspected. The worse than useless vaccinations, and the unnecessary and harmful postponements for which cheap dispensaries are largely responsible, together with the needless, if not mischievous, Form B in the present vaccination certificates, will become things of the past. During my twenty years' experience as a public vaccinator I had my full share of difficulties to contend with, but I found none greater

to overcome than the objections to having the operation efficiently performed. I was constantly met by the statement that "Dr. So-and-so only vaccinates in one place and says it is as good as six." The practice of producing one vesicle is largely pursued, as above hinted, by the proprietors of cheap dispensaries throughout the metropolis, the fee (6*d.*) being about in proportion to the benefit conferred upon the unfortunate infant; but the harm the false security engenders in the minds of the parents cannot at present be estimated. I have no doubt that the fee of 2*s.* 6*d.* would act as a stimulus to such members of our noble profession as above alluded to. The public vaccinators would be the chief sufferers by the proposed change, but the loss could not be considerable, for at the present time the public stations are very sparingly attended and many vaccinators are barely able to support arm-to-arm vaccination in consequence. Stations at which a few years ago from twenty to thirty infants were vaccinated weekly now have a miserable attendance of five or six, and consequently very little choice of vaccinifers. The increased cost will be another argument against the suggested plan, but there would be a reduction in the cost of rent and maintenance of public stations, and certainly with more general and efficient vaccination a decrease under the head of removal and treatment of cases of small-pox, which, according to the annual report of the chairman of the Metropolitan Asylums Board, amounted for the year ending September, 1893, to the sum of £184,000, the number of cases of small-pox admitted to the hospital ships during the year 1893 being 2441, with the loss of 184 lives. If the public—i.e., Poor-law—vaccination stations were closed it would doubtless be desirable to retain and probably to increase the number of stations where vaccination is performed from calf lymph, not only for the benefit of those who prefer animal vaccination, but chiefly also for the purpose of supplying lymph to all medical practitioners, even should it be found necessary to make a charge for the same.

In the foregoing suggestions I have had the requirements of the metropolis only in view, as it would unquestionably be unwise to disturb the arrangements in the provinces where conditions are altogether different from London, and, as far as I am aware, work satisfactorily.

Duncan-terrace, N.

SUDDEN DEATH OF A BOY FROM CONVULSIONS FOLLOWING RUPTURE OF THE STOMACH.

BY BRIGADE-SURGEON-LIEUTENANT-COLONEL C. McD. O'FARRELL, F.R.C.S., M.R.C.P. IREL.

AN apparently healthy, fairly strong boy nearly thirteen years of age returned home from a school (where he was a day boy) on Feb. 27th last at 5.30 P.M. He was in high spirits, and, having played with his brother for a few minutes, again went out. He returned in a short time and said he felt very cold and had a headache. He drank some tea, but would not eat anything, and his mother, thinking he was suffering from a bilious attack, the effects of a chill (he had left off in the morning a warm jersey which he had worn throughout the winter), gave him a dose of saline mixture and put him to bed. He was sick after taking the saline mixture and again during the night. The following morning he was no better and had another dose of the saline mixture, after which he again vomited. He continued to complain very much of his head, and about 11 A.M. his mother gave him five grains of phenacetin and also a similar powder at 1.30 P.M. From 1.30 P.M. to 3 P.M. he remained in pretty much the same state; he thought his head was better, but said his limbs ached. At 3 P.M. he suddenly screamed and had an attack of the most violent convulsions, which affected all the voluntary muscles. The paroxysm was followed, after a very short interval, by another, and the fits increased in frequency and severity until 4 P.M., when death took place. Immediately after the first attack a medical man was sent for, but he only arrived in time to see the boy die. An inquest was held on March 1st, when the medical man, who had made the post-mortem examination twenty hours after death, stated that on opening the abdomen he found it full of matter similar to that which had been vomited during life, which consisted of partially digested food mixed with bile. He also found a rent three inches long in the back of the stomach. There was a large area of inflammation round the rent, and the tissues in the neighbourhood were soft and pulpy. The stomach was empty; the gullet and tongue were normal. All the other organs were structurally perfect and healthy, although much congested. There was no peritonitis. He could not say whether the convulsions were caused by the rent in the stomach, or whether the rent in the stomach was brought about by the violence of the convulsions. Acute inflammation might have caused the vomiting, which in its turn might have caused the rupture. Strychnine would produce convulsions similar to those which occurred. The inquest was postponed until Monday, March 10th, and the stomach and vomit, and what remained of the saline mixture and powders, were sent to the county analyst for examination. At the adjourned inquest the analyst stated that he could find no trace whatever of poison either in the stomach or vomit, but that a microscopic examination revealed degeneration of the muscular coat round the rent, the fibres being broken into little cubical masses, and surrounded on all sides by fatty globules. Except near the rent the walls of the stomach were healthy. The saline mixture and powders were harmless. The verdict was "Death from natural causes."

There are many points of interest about this case. Ruptures of the stomach of the extent found at the necropsy are very unusual except as the result of injury, the action of corrosive poisons, and post-mortem digestion, but there was no mark of any injury on the body, and the well-marked area of inflammation round the rupture, the fatty degeneration of the muscular coat, the fact that the contents of the stomach were only very slightly acid, and were found all over and among the bowels conclusively proved to my mind that the rupture occurred before death, and this is also the opinion of the medical man who made the necropsy. Gastric ulcer before puberty is very rare, and in the case under consideration there were no symptoms whatever of any grave affection of the stomach. The boy appeared to be in perfect health up to the evening of Feb. 27th, and was not sick until he had taken a dose of the saline mixture. He never complained of any pain in the gastric region, and he only vomited two or three times. On the 28th the vomit consisted of partially digested food mixed with bile, and never contained blood or coffee grounds. When the contents of the stomach escape into the peritoneal cavity death almost invariably is due to peritonitis, but in this case it was caused by tetanic convulsion, which killed the boy in less than an hour, and were precisely similar (there was opisthotonos) to those which would be produced by a large dose of nux vomica or strychnine. Although there were no gastric symptoms it may, I suppose, be almost taken for granted that chronic gastritis or gastric ulcer was present before Feb. 27th, and that on that date, and from the effects of a chill, acute gastritis supervened. When perforation occurred, and the contents of the stomach escaped into the abdominal cavity, there must have been a great shock to the nervous system, which in a young patient was not unlikely to be followed by convulsions.

Leicester.

A CASE OF CHLOROFORMISATION.

BY SURGEON-LIEUTENANT-COLONEL EDWARD LAWRIE.

ON March 20th, 1894, a male native aged twenty-four years was operated upon in the Afzulgunj Hospital under chloroform, the operation being the excision of a bubo. The chloroformist was a fourth year's student. The amount of chloroform required to produce full anæsthesia was five and a half drachms, the time occupied to produce it was seven minutes fifteen seconds, the decisive sign being an insensitive cornea. The total amount of chloroform employed was five and a half drachms, and the operation lasted for eleven minutes thirty seconds. The pulse and respiration immediately before the inhalation were respectively 80 and 28. It should be noted that the patient's temperature was 99·4° F. Food was last taken on the morning of March 19th,

1894. Just previously to his return to consciousness the patient vomited bile.

The following are the time observations made during the administration, which commenced in one-drachm doses at 9.25 A.M.:—

H. M. S.	
	One-drachm doses.
9 25 15	Resisting and shouting, regular breathing.
9 26 15	Quiet. Chloroform added to the cap, one breath of air. Respiration 32, pulse 72 a minute, both regular.
9 27 15	Chloroform added to the cap, one breath of air. Respiration 24, pulse 68 a minute, both regular.
9 27 28	Snoring.
9 27 55	Noisy expiration.
	Half-drachm doses.
9 28 15	Chloroform added to the cap, one breath of air. Respiration 28, somewhat irregular, but without any irregular intake; pulse 76 a minute, regular.
9 28 30	Holding breath (apnœa).
9 28 50	Breathing regularly; snoring deeply.
9 29 0	Chloroform added to the cap, one breath of air; then held breath till 9.29.30.
9 29 30	Breathing regularly.
9 29 45	Chloroform added to the cap, no air inhaled; holding breath till 9.30.30.
9 30 30	Quiet breathing; snoring; chloroform added to the cap, one breath of air. Pulse 42 a minute, regular.
9 30 30 to 9 31 45	alternate irregular breathing and holding breath; snoring deeply. No irregular intake.
9 31 45	Chloroform added to the cap, one breath of air; breathing more regularly.
9 32 0	Regular breathing; still snoring.
9 32 30	Over cornea insensitive, cap removed. Respiration 32, pulse 52 a minute, both regular.
9 35 10	Vomiting bile.
9 36 25	Consciousness returning.
9 36 45	Operation and dressing finished, patient removed to bed.

The pulse and respiration from the commencement of administration until complete anæsthesia was reached showed the following qualities:—

H. M. S.	Pulse.	Respiration.
9 25 0	..... 80 regular	..... 28 regular.
9 26 15	..... 72 ,,	..... 32 ,,
9 27 15	..... 68 ,,	..... 24 ,,
9 28 15	..... 76 ,,	..... 28 irregular.
9 30 30	..... 42 ,,	..... holding breath.
9 32 30	..... 52 ,,	..... 32 regular. (Anæsthesia complete.)

The promotion of anæsthesia in this case was slow on account of the persistent irregularity of the breathing after the patient became unconscious. When the inhalation was begun at 9.25.15 the patient resisted violently and shouted until 9.26.15. The breathing was then regular until 9.27.28, when snoring set in, and was accompanied shortly afterwards by noisy forced expiration. The respiration continued irregular, but without any gasping or irregular intake, till 9.28.30, when apnœa occurred for 20 seconds. At 9.29.0 the patient held his breath for 30 seconds, and again, at 9.29.45, for 45 seconds. The assistant who was taking observations on the pulse called out, "The pulse is only 42," and for a fraction of a moment I felt an almost irresistible inclination to stop the inhalation. But the pulse was not being taken as a guide in any way, and the irregularity of the breathing was sufficient to account for its slowness; moreover, the facts—(1) that though the breathing was irregular there was no irregular intake, and (2) that there was a small measured dose of chloroform on the cap—prevented any misgiving, after the momentary shock, as regards the possibility of over-dosing having taken place. The inhalation was therefore continued for two minutes longer until anæsthesia was complete. As the anæsthesia deepened the breathing became regular, and on its completion the pulse was 52. Since we commenced five months ago to take systematic clinical observations on the circulation under chloroform I have come to understand how thoroughly it must demoralise the administrator to take the pulse as a guide, and this point is illustrated by the present case. If the chloroformist had relied in any way upon the pulse he would have been obliged to stop the inhalation when it slowed down to 42, and erroneous conclusions might have been drawn from the case. I had great difficulty in persuading myself originally to allow clinical observations to be taken on the pulse, on account of the bad effect it might produce on the students. We have now, however, accurate observations on the pulse in over 700 cases of chloroformisation, and they prove, like the experiments of the Hyderabad Commission, that no chloroformist who takes the pulse as a guide can by any possibility give chloroform properly. In other words, uniform safety under chloroform can only be attained by complete disregard of the pulse as a factor in the administration. The record makes it clear that this was one of those cases which illustrates the principle that the chloroformist should be guided entirely by the respiration. The slightest distraction of his attention from the all-important process of inhalation would have resulted either in danger or in inability to fully anæsthetise the patient.

Hyderabad.

AN ACUTE EPIZOOTIC AND EPIDEMIC OUTBREAK OF HYDROPHOBIA AT MADEIRA.

BY DR. JULIUS GOLDSCHMIDT.

THE successive occurrence, both epizootic and epidemic, of hydrophobia in a country where it had been hitherto unknown causes the history of recent occurrences in Madeira to be of great interest to the epidemiologist.

The number of dogs in Madeira has always been large. There is no official statement on the point, but I may be entitled, having been a resident physician on the island for over twenty-seven years, and having therefore become extremely familiar with the place and its inhabitants, to make an estimate. In doing so, I am sure that I remain below the truth in putting the figure at one dog to two households (*fogos*) each of six individuals—i.e., practically 11,000 dogs to 130,000 persons. The figures are less surprising if it is remembered that similar statistics for Europe indicate on an average one dog to sixteen inhabitants. There is only one town in Madeira—viz., the capital, Funchal, with 30,000 inhabitants; the rest of the population lives either in small hamlets, which rarely deserve the name of villages; or in isolated huts, built on the small plots of ground belonging to them. Thus it happens that the solitary peasant remains, notwithstanding his poverty, in continual fear of thieves and always keeps a dog for his protection. These dogs find their miserable food as well as they can; few of them are regularly and abundantly fed. Their race can only be described as constituting an unjustifiable type of mongrel; but in spite of all these adverse conditions, in spite of utter neglect, racial degeneration, and overcrowding, hydrophobia remained unknown in Madeira until less than two years ago.

At the beginning of June, 1892, rumours were rife in Funchal relating to "a new dog's disease." The animals died in a few days under symptoms which suggested at once the idea of hydrophobia. At the outset the competent authorities did not admit this diagnosis, and the condition was only many weeks later recognised as rabies, a diagnosis which was then confirmed by inoculations. The symptoms were briefly as follows. Animals known as quiet began to snap at all around—even at their own masters. After a short period (two to four days) of excitement paralysis set in, which terminated in the death of the dog. At the end of June reports came in from all parts of the island telling the same story and describing the disease as spreading not alone amongst dogs but also amongst goats and cats. This rapidity of spread is noticeable, for in Madeira communication between the different parishes is precarious on account of difficult roads and numerous deep ravines; but, notwithstanding these topographical difficulties, the epizootic outbreak traversed the island in a marvellously rapid manner, showing itself at almost the same time in the town and in the most distant parts. The dogs underwent an incubation period of from twenty-five to thirty days; the illness lasted for from four to five days. During the first and most acute period of the outbreak 300 dogs perished

on the southern half of the island, and over 1000 were killed on the appearance of suspicious symptoms. One case of undoubted hydrophobia recovered gradually, and the great rarity of this fortunate issue entitles the case to more particular mention. The animal, a bitch three years old and sterile, began to be sad and refuse food on Aug. 15th, 1892. Paralysis of the nether paw set in on the following day. From the 17th she kept up a continual hoarse barking. Five days later she displayed complete general paralysis, with the exception of the tail, which she would wag at the sight of her master. She had considerable difficulty in masticating and swallowed only with great efforts the broth which her master, wearing gloves of thick leather, poured down her throat. The paralysis of the jaw lasted for one month, and during the whole of this time the dog was fed with chicken broth and minced meat. The paralysis then disappeared, and with the remission of symptoms came an amelioration in the state of the tongue. The general paralysis came to a practical end in four months, but even six months after the beginning of the disease there still remained a stiffness in the movements of the neck and the right shoulder.

By December, 1892, the outbreak came to an end. Thus the epizootic lasted for about six months, the last two months having yielded, however, only a small number of cases. Other animals suffered comparatively little. In Funchal and its environs I only met with 6 cases amongst cats, 4 amongst hogs, and 6 amongst goats. Amongst cattle two cases were said to have appeared, but I cannot guarantee this rumour. With regard to the outbreak of a human epidemic it is regrettable that the population of the island suffered in a very marked degree. Nine fatal cases were reported amongst the 60,000 inhabitants of the southern parishes of Funchal, Santa Cruz and Machico—a formidable death-rate, which, applied to the population of the United Kingdom, would have resulted in 5000 victims. The last death from hydrophobia occurred in November, 1892. The local papers, it is true, announced another case on Sept. 14th, 1893, in one of the southern parishes, but I could not ascertain whether the patient, a child nine years old, which was bitten nine months before his death, had really died from hydrophobia.

With regard to the origin of the calamity, it appears to be certain that the epizootic was not autochthonous, but was imported into the island by some continental animal which had escaped the usually over-strict supervision of the Funchal Custom-house officials. Subsequent researches revealed the landing of a Lisbon dog on May 1st, 1892. It died on July 23rd from hydrophobia after nine days of illness, a duration of disease considerably longer than was afterwards the average among the dogs attacked in Madeira. I hesitate therefore to accuse this animal of having introduced the epizootic into the island at the beginning of June; for if, on the one hand, an incubation of over sixty-seven days, though longer than that observed in the other cases, is not impossible, yet, on the other hand, the saliva of this dog must have acquired infectious properties at a very early day of the incubation. But it is known that among dogs in countries where the disease has been long established there is a much longer incubation period than among dogs inhabiting a hitherto uninfected territory, and the predisposition of the (if I may so call them) uninoculated Madeira dogs may have determined their sensibility to the saliva of the Lisbon dog.

At Madeira the epidemic disappeared as suddenly and completely as it broke out, for since the first week of December, 1892, up to this very moment no new cases have been registered. Whether this was due to the action of the police in severely imposing the use of the muzzle or because the infected dogs had been all destroyed it is not possible to say; it is to be hoped, however, that the island will again enjoy perfect freedom from this terrible disease. The acuteness of the outbreak among the human population was quite in proportion with that among the dogs. The first victims were two children, who died at two days' interval from each other during August. The incubation periods were thirty-eight and forty days respectively, and the duration of their illness was three and four days. The average of the incubation among the human sufferers was forty to sixty days. The two children above mentioned died nearly three months after the appearance of the disease among the dogs, and many persons had been bitten before them; yet there had been no deaths reported anterior to theirs. This gives practical support to the view that the virus had to migrate through many dogs before it acquired a concentrated power of infection, sufficient to destroy the human vitality, which is much more resistant to its action than is the vitality of dogs and other animals, and this is a dogma now very generally accepted by bacteriologists. The post-mortem examinations of the dogs, which were published by the veterinary officer to the district, Senhor Tierno, show that in almost all cases acute gastro-enteritis, peritonitis, and general inflammation of the abdominal organs were present. The inoculations of the medulla on guinea-pigs and rabbits gave positive results. The treatment of the human victims was directed towards the symptoms. One lady bitten was treated at the Institut Pasteur and has enjoyed good health up till now.

In conclusion, I may be allowed to append the following short summary of my own conclusions drawn from the history of this epidemic: (1) Hydrophobia is never spontaneous in origin. (2) An outbreak of hydrophobia spreads with much greater severity and with a much shorter incubation period in a country where it has been freshly introduced. (3) The epizootic can be got rid of by the extermination of all animals infected and suspected. (4) Dogs may recover spontaneously from hydrophobia.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF ADENOMA OF THE BREAST WHICH AFTER NINE YEARS DEVELOPED CARCINOMA.

BY WARRINGTON HAWARD, F.R.C.S. ENG.,
SURGEON TO ST. GEORGE'S HOSPITAL.

THERE still seems to be a doubt in the minds of some surgeons as to the necessity of removing adenomata of the breast so long as they are stationary and painless, although of late years there has been a growing conviction of the wisdom of doing so. It may be useful, therefore, to record briefly a case in which an adenoma was under observation for nine years, during which time it remained stationary, and then rapidly developed an unquestionable carcinomatous growth, the patient in the mean time appearing to be in perfectly good health.

In March, 1884, I was consulted by a lady on account of a tumour in the right breast, which she had noticed eight or nine months previously (1883). It had given no pain, but during the first six months had steadily increased in size; for the last two or three months it had not materially altered. The patient, who was thirty-nine years of age, was in excellent health. In the upper part of the right breast there was a firm, lobulated, painless tumour the size of a bantam's egg. It was movable under the skin, and with the adjacent part of the breast moved easily over the tissues beneath. The rest of the breast, and the neighbouring lymphatic glands, appeared quite natural. The patient was travelling, and anxious to avoid an operation, and I told her that there was no immediate necessity for the removal of the tumour. She was advised to cover the breast with a soft pad, to abstain from examining the tumour, to take iodide of potassium, and to present herself for examination if any material change occurred. The tumour at first diminished slightly and then remained unaltered till 1888. I saw the patient at intervals; she continued in excellent health, and the tumour gave no trouble, excepting that it sometimes became rather sensitive during menstruation. In 1888 it seemed to me rather smaller and firmer, as if it had undergone some little contraction, and at one spot the skin dimpled slightly when made tense over the swelling. During the next three years I saw it occasionally and observed no change. In November, 1892, however, the patient, whom I had not seen for a year, exhibited a distinct hard nodule of carcinomatous growth in the skin and that part of the tumour to which the skin had become adherent; she had noticed this change slowly taking place during about six months, but, being away from England, had consulted no one. She had gained flesh and felt well. I immediately removed the breast, and, as a careful examination revealed no glandular infection, I did not open the axilla. The patient made a good recovery. In the upper part of the breast was the firm fibro-adenoma in the deeper part of which were some small cysts. In the skin, where adherent to the tumour,

was a button-like nodule of hard carcinomatous growth, invading the adjacent part of the tumour, but not penetrating deeply into it. Dr. H. D. Rolleston kindly examined it microscopically. He found the nodule of recent growth to be a typical specimen of scirrhous carcinoma. The rest of the tumour remained quite free from carcinoma and showed only the ordinary appearance of a fibro-adenoma, excepting the cystic part, which, besides fibrous tissue of old standing, showed compressed gland tubes and dilated ducts, with a few papillomatous processes projecting into the dilated ducts.

Here, then, was a case which, during nine years' careful observation, exhibited the clinical features and history of fibro-adenoma, but which then took on the characters of active carcinoma. Eleven months after the removal of the breast two small nodules of scirrhus were removed from the neighbourhood of the scar. The patient has since remained well. It seems probable, though of course it cannot be proved, that if the adenoma had been removed when first seen the subsequent cancerous invasion might have been avoided. At any rate I cannot but think that in the light of this and other somewhat similar cases (e.g., that of Mr. J. Hutchinson, jun., in which cancerous growth occurred around an adenoma of long standing[1]) we shall be doing what is best for our patients by advising the removal of all adenomata of the breast, even of those which seem quite stationary and quiescent.

Savile-row, W.

COEXISTENCE OF INFECTIOUS DISEASES IN THE SAME INDIVIDUAL.

BY EDWARD CARMICHAEL, M.D., M.R.C.P. EDIN.,
VISITING MEDICAL OFFICER TO THE CITY POORHOUSE, CRAIGLOCKHART

IN connexion with Dr. Caiger's paper on the above subject at the Epidemiological Society[2] the following case seems worth putting on record, it being unique so far as my experience goes, but I would gladly hear of any other similar case.

The patient, a boy six years of age, had been ill for four days before I saw him, suffering from sore-throat, vomiting, and a slight rash. I suspected it might prove to be a case of scarlet fever. The boy was still feverish, although no rash was to be seen, and accordingly I looked for desquamation. This soon appeared and confirmed the diagnosis. What puzzled me was the temperature still remaining high. Diarrhœa set in, then splenic enlargement, but there were no spots on the abdomen. The enlargement of the spleen became so marked and the anæmia so profound that I began to fear I had to do with an acute case of leucocythæmia. Dr. Claud Muirhead kindly saw the boy in consultation with me, and after examination was inclined to think it might be leucocythæmia, but thought I should still keep typhoid fever in view seeing the microscopic examination of the blood showed no very marked increase of leucocytes. After a prolonged illness the spleen began to diminish, the diarrhœa to cease, and a slow but steady recovery ensued, thus putting leucocythæmia out of the question. The interesting and, as I have said, unique point was that this boy infected his sister, whom we had to keep in the house, with a distinct and typical scarlet fever which set in about ten days after my visits began, and some weeks after the father, while helping to nurse the boy, went through a typical typhoid fever, with the usual temperature curve, rash, and diarrhœa, so that my diagnosis was that the boy had both scarlet fever and typhoid fever, that he gave the one to his sister and the other to his father. All three patients recovered. No defective drainage or water- or milk-supply could be traced, but I found that a day or two before the illness began the boy had let a key fall through a grating of the street gutter, to recover which he lifted the grating, lay down and scraped among the débris.

London-street, Edinburgh.

[1] Path. Trans., vol. xxxix., p. 319.
[2] THE LANCET, May 5th, 1894.

THE Duke and Duchess of Fife recently opened the new buildings of the St Marylebone General Dispensary, Welbeck-street. The buildings have been erected at a cost, inclusive of fittings, of £6000, some £2000 of which still remains to be collected in order that the buildings may be entirely free from debt.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

MYOMA OF UTERUS—OVARIAN TUMOUR WITH TWISTED PEDICLE.

(Under the care of Mr. WM. ANDERSON.)

THE method of operation for uterine fibroid described in the following history of a case recently under the care of Mr. Anderson shows the excellence of this method of treatment when it can be employed. The contrast between the extra-abdominal treatment of the pedicle and the intra-abdominal is very great, and those who have only had an experience of the former will recognise the great advantages which the latter offers. Instead of the continued attention which the extra-abdominal method requires until the separation of the wire, a process not unattended with anxiety, the whole of the after-treatment in the intra-abdominal method is limited to that of an ordinary laparotomy.

CASE 1. *Myoma of uterus; operation by a modification of Schroeder's method; recovery.*—The patient, a married woman thirty-five years of age, was admitted into St. Thomas's Hospital on Dec. 15th, 1893. She had suffered for two years from menorrhagia, at first almost painless, but more recently associated with dragging sensations that greatly interfered with her domestic work. In other respects she had always enjoyed good health. It was said that her mother had undergone an operation for an abdominal tumour, but there was no information as to the nature of the growth. On admission the patient, a woman of fairly healthy aspect, was suffering from a tumour in the lower part of the abdomen. The growth was central and extended from behind the symphysis to within an inch of the umbilicus. It was spherical and smooth, and was connected on each side with a cord-like band, which ran outwards from near the upper end of the tumour towards the pelvic brim. On examination per vaginam the uterine canal was discovered to be about four inches in length and displaced forwards, apparently by a growth in the posterior wall of the organ. On Jan. 1st, 1894, ether having been administered, an incision three inches and a half in length was made in the median line of the abdomen, between the symphysis and umbilicus, exposing a tumour which was seen to consist of the enlarged uterus with its appendages. On drawing the mass from the abdominal cavity, after enlarging the incision, the cervix was found free from growth and forming a distinct pedicle. The ovarian vessels were then ligatured in the infundibulo-pelvic ligaments, the uterine vessels secured on each side of the cervix, and the broad ligaments were divided, leaving the appendages attached to the uterus. The tumour thus freed, an incision was made through the cervix uteri near its junction with the body in such a way as to leave anterior and posterior flaps, and the whole mass was removed. The operation was almost bloodless, only two or three small vessels in the broad ligaments requiring ligature. The cavity of the cervix being recognised on the face of the stump, the edges of the mucous membrane were united by catgut sutures; a second set of buried silk stitches were then passed through the thickness of the cervical walls on each side, uniting the whole of the opposed surfaces of the two flaps; finally, the peritoneal edges of the flaps and divided broad ligaments were brought together by Lembert sutures. The abdomen was closed by deep and superficial sutures, without drainage. The operation, although necessarily long, was well borne. No complication arose except some suppuration in the course of the superficial parietal sutures, which, however, did not interfere with progress to any material extent. The patient was discharged cured on Jan. 30th.

Remarks by Mr. ANDERSON.—The tumour proved to be, as diagnosed, an intra-mural myoma in the posterior wall of the uterus, not encroaching upon the cervix. The case was one

especially well adapted for the intra-peritoneal flap operation, a procedure which may be regarded as more fully in accordance with modern surgical principles than the older plan. The method is simplicity itself, the preliminary ligature of the vessels rendering the hysterectomy almost bloodless, while the careful suturing of the peritoneum reduces the risk of infection to a minimum. There is, moreover, no strangulation of the neck during the excision of the tumour, and hence the vitality of the stump is uninterfered with. In cases where the growth encroaches upon the cervix the difficulties would of course be greater, and the removal would necessitate a supplementary enucleation, but in the hands of Schroeder the results in such examples have been very favourable, and there is little doubt but that with increased experience the mortality from hysterectomy for myoma may be reduced to a point little, if at all, higher than that from ovariotomy. The patient was seen recently and was then in perfect health. There had been no menstrual flow, and nothing had occurred to mark the advent of the catamenial periods. The abdominal cicatrix was sound, and there was no tendency to hernia.

Rotation of an ovarian tumour is not a rare occurrence, although its frequency has diminished greatly since the practice of early operation has become established, but the interest of the case lies chiefly in the curious train of symptoms induced by the twisting of the pedicle. The effects of the accident must necessarily vary with the rapidity and degree of the torsion and, to some extent, with other circumstances. If the rotation be moderate there may be few or even no symptoms; if sufficient to obstruct the return of venous blood, while more or less arterial blood still gains admission, great congestion will arise, with a tendency to extravasation beneath the serous surface and into the cyst, but without any sudden development of shock; but if both ingress and egress of blood be simultaneously arrested the symptoms of collapse will be urgent and may be rapidly fatal. What the destiny of a tumour with twisted pedicle might be where the accident does not destroy life it is not easy to foretell. As Dr. Warbasse points out in a valuable article on the subject,[1] even complete strangulation is not necessarily productive of gangrene; and in any case, if infective organisms be absent, the growth may degenerate into a harmless mass of fibrous tissue. In the present case the tumour, though gorged with blood, was neither apoplectic nor gangrenous, and no extravasation had taken place. The urgent symptoms were those of insidious but extreme asthenia, quite unaccompanied by pain or fever, but bringing the patient to death's door before the real nature of the case had been surmised. The constipation was unattended by vomiting, pain, or any other indication of severe intestinal obstruction, and, apart from the question of etiology, was probably of small importance except as masking the real nature of the condition. It is not easy to assign a cause for the rotation of an ovarian cyst. It has been attributed to pregnancy; mechanical shocks, as from a fall or blow; contractions of the abdominal wall in association with vomiting and diarrhœa, and during physical exertion of any other kind; and to the simple transit of fæces in the large intestine, especially in the sigmoid flexure. In this patient it is not unlikely that the accident was due either to the last attack of constipation or to the treatment adopted for its relief, but it is impossible to speak with any certainty. The result was gratifying, but not remarkable. Recovery has followed in over 90 per cent. of such operations, and Mr. Knowsley Thornton believes that the mortality is little greater than that from ordinary ovariotomy. There is no doubt, however, that the patient had an extremely narrow escape. As a sequel it may be added that the girl was readmitted into the medical wards a few months afterwards with advanced phthisis of both apices and tuberculous disease of the lumbar vertebræ. The operation cicatrix was quite strong and the abdomen free from growth.

CASE 2. *Ovarian tumour with twisted pedicle; urgent symptoms; operation; recovery.*—A girl fifteen years of age was admitted into St. Thomas's Hospital on Dec. 3rd, 1892, under the care of Dr. Payne. She was of healthy parentage and, although delicate, had not suffered from any severe illness until about ten weeks previously, when she became subject to attacks of obstinate constipation, each lasting for from five to nine days. One of these attacks occurred a week before entering the hospital. On admission the patient presented the aspect of a girl of frail constitution, suffering from constipation, with irregular distension of the abdomen, apparently intestinal in origin. There was no local pain or tenderness, and no vomiting, but prostration was present to a degree altogether disproportionate to the other symptoms. During the three days after admission the asthenia steadily increased. On Dec. 6th the condition had become urgent, but the local signs were more positive, owing to the subsidence of the intestinal distension. A firm mass could then be felt occupying the left lower quadrant of the abdomen and encroaching upon the pelvic inlet. It was smooth and irregularly rounded, fairly movable, not sensitive, and appeared to be nearly as large as the patient's head, and from its characters and situation was judged to be either ovarian or renal. After a surgical consultation it was decided to operate at once. When the girl was brought into the theatre she was almost pulseless and apparently dying. Mr. Anderson opened the abdomen by a long incision in the left semilunar line and exposed a multilocular cystic tumour about nine inches in diameter, occupying the left iliac fossa and extending diagonally into the right side of the pelvis. It was of a dark purple colour, with dilated vessels, but showed no trace of inflammation. On bringing it through the parietal opening it was found to be connected with the right ovary by a narrow pedicle, which had become twisted by a spontaneous rotation of the growth to such an extent as to impede the return of venous blood without producing gangrene. The right ovary was normal. The pedicle was transfixed and ligatured, and after removal of the mass the wound was closed by deep peritoneal sutures of catgut and superficial silk stitches passed through the muscular and cutaneous layers of the abdominal wall. The operation was completed as quickly as possible, and the patient, who appeared to be almost *in extremis*, was sustained by hypodermic injections of brandy. The pulse improved after removal to bed and on the following morning all urgent symptoms had disappeared. Recovery was rapid and uninterrupted, and the patient was discharged on Jan. 6th, 1893. The tumour was an ordinary multilocular ovarian cyst, with gelatinous contents. Its vessels were strongly congested, but there were no extravasations and no signs of impending gangrene.

[1] Annals of Surgery, April, 1894.

HARTLEPOOLS HOSPITAL.

CASE OF ACUTE INTUSSUSCEPTION; OPERATION; RECOVERY.

(Under the care of Dr. AINSLEY.)

THE profession has come to regard operation for acute intussusception in infants with much more favour during recent years, and it has certainly been more frequently resorted to with success than was thought possible when it was first proposed. The number of cases in which recovery has followed operation when the age of the patient was under two years is, however, small, and we think that such should be published. We have no doubt that the frequent publication of cases in the columns of THE LANCET, with an earnest advocacy of operation at an early date, if inflation or injection of fluid into the bowel, anæsthesia, and abdominal massage have been unsuccessfully tried, has done much to save the lives of several children. Whilst we regard the placing of such successful operations before the profession as a duty, we also think that it is incumbent on those who have recently operated to give the reasons why failure has occurred in cases operated on without success. We want more definite information on this subject. There is, unfortunately, only too long a list of failures by other methods with which we can compare them. We gave a short summary of the various methods of treatment which have been tried in THE LANCET of 1889.[1] For the notes of this case we are indebted to Mr. Angus Macgregor.

A male infant eight months old was admitted into the Hartlepools Hospital on March 6th, 1894. He had hitherto been rather constipated, but otherwise healthy. The child at 3 P.M. of the same day awoke from sleep uttering a cry of pain, and shortly afterwards he vomited. The pain was intermittent in character, and the vomited matter was not stercoraceous. In the course of the afternoon the bowels acted, and blood and mucus were passed at intervals. When admitted at 9 P.M. the child was pale and in a state of collapse. A hard, sausage-shaped tumour was felt by palpation on the left side of the abdomen in the line of the descending colon. This tumour was also felt per rectum about two inches from the anus. There was no distension of the abdomen. The

[1] THE LANCET Mirror of Hospital Practice, Jan. 26th, 1889.

child was chloroformed and inflation tried along with careful manipulation, but without apparent effect.

Operation.—Six hours and a half from the commencement of the symptoms an incision one inch in length was made in the middle line of the abdomen below the umbilicus. As this was insufficient and could not be extended downwards, owing to the bladder rising very high, it was continued upwards for one inch, avoiding the umbilicus. An intussuscepted mass was easily found and brought out at the wound. The part was œdematous and congested, and the omentum was found to have passed in between the tubes along with the mesentery. Considerable difficulty was experienced in reducing the intussusception, but by manipulation and squeezing from below, keeping tense the upper part, this was accomplished and the bowel returned. The intussusception was found to have commenced at the hepatic flexure of the colon. The wound was now closed with silk stitches passing through all the coats. The operation, including the time for the inflation, lasted forty minutes. After the operation the child was very much collapsed. A morphia suppository (one-eighth of a grain) was administered and brandy at intervals. Next day the pulse was 180 per minute and the temperature 100° F. Stimulants and opium were continued, and in the evening the child was fed at the breast. There was no vomiting. On the morning of the 11th the bowels were opened naturally. After this there was nothing eventful, and the child left the hospital on March 20th and was on April 24th in excellent health.

Remarks by Dr. AINSLEY.—This case supports the view of modern writers that prompt surgical treatment offers the best chance of success in acute intussusception. The difficulty in unravelling the bowel as well as its congested and œdematous condition make us believe that, had the operation been postponed even for a few hours, the chances of success would have been very seriously jeopardised. I am also persuaded that prolonged inflation or injection could have done nothing but harm.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Myxo-sarcoma of Uterus.—Tuberculous Ulcer of Stomach associated with Tuberculous Disease of Pericardium and Multiple Tuberculous Tumours of Brain.—Ruptured Abdominal Aneurysms.—Multiple Loose Cartilages from the Knee.—Carcinoma of the Bronchus.—Papilloma of the Bile-duct.—Pachymeningitis Hæmorrhagica.—Spina Bifida.—Congenital Pelvic Cyst.—Single Hydronephrosis, with Sarcoma of Supra-renal Capsule on same side.

THE annual general meeting of this society was held on May 15th, Dr. PAVY, President, being in the chair.

Mr. JACKSON CLARKE exhibited a section of a Myxo-sarcoma of the Uterus, showing a cell dividing by irregular mitosis. This was held by Hausemann to be characteristic of cancer. On the other hand, Stroebe, who had found asymmetrical mitoses in healing wounds of the cornea in rabbits, concluded that wherever mitoses were abundant some were irregular. Mr. Clarke said he had demonstrated such irregular mitoses both in epithelioma and sarcoma and claimed that identical changes were to be demonstrated in what he claimed were parasitic organisms in these growths. On the strength of a comparison of the bodies undergoing irregular mitosis in sarcoma of the uterus with others in sarcoma of the testis, he thought it quite possible that they might also be regarded as parasitic.

Dr. HABERSHON exhibited specimens illustrating a case of Tuberculous Ulcer of the Stomach associated with Tuberculous Disease of the Pericardium and with Multiple Tuberculous Tumours of the Brain, occurring in a bricklayer aged thirty-five. Tubercle bacilli were discovered in the ulcer of the stomach. The lungs and pleuræ were affected, and probably, in consequence of the brain lesion, epileptiform convulsions and coma occurred. The tumours were of cheesy consistence, symmetrically placed at the posterior part of each hemisphere, and were about the size of filberts. These complications were somewhat rarely met with separately, and it was extremely unusual to find them all present in one subject.

Dr. LEE DICKINSON exhibited two specimens of Ruptured Aneurysms of the Abdominal Aorta from Congenital Hypoplasia of the Arteries. One specimen was from a male subject aged twenty-nine, in whom there was no history of great exertion or strain, and whose arteries were almost entirely free from atheroma, but abnormally thin and narrow. This aneurysm burst into the peritoneal cavity. The other was from a female subject aged thirty, whose arteries were faultlessly smooth internally and free from acquired disease microscopically, but almost papery in their thinness and also very narrow. On the abdominal aorta of this woman was a second aneurysm, while on the renal and mesenteric arteries were other aneurysms. The aneurysm burst into the retro-peritoneal tissue. In this case there were several disconnected hæmorrhages not due to the rupture of any large vessel. These hæmorrhages were interesting in connexion with the fact that hypoplasia of the arterial system had several times been observed in hæmophilia.—Dr. M. FLETCHER inquired whether a microscopic examination had disclosed any defect in the muscular wall or membrane of Henle, such as Eppinger had described in cases of multiple aneurysm.—Dr. LEE DICKINSON, in reply, said that, though the media and intima were unusually thin, there was no other pathological change.

Mr. JAMES BERRY showed 1047 Loose Cartilages which he had removed from the Knee-joint of a man aged twenty-two. A smaller number had been removed from the same joint four years previously and had been shown to the society then.[1] After the first operation the patient had remained well for more than three years and then began to complain of weakness and swelling of the knee. The cartilages were removed by direct incision, and the wound healed without any complication. The loose bodies varied in diameter from $\frac{5}{8}$ inch down to less than $\frac{1}{16}$ inch. They were of a pearly white colour, with a smooth glistening surface; the smaller ones were composed of pure hyaline cartilage, the larger ones of similar nodules of cartilage united by loose fibrous tissue. None of them were pedunculated or attached in any way to the synovial membrane.—In answer to Mr. EDGAR WILLET, Mr. Berry stated that the bodies were composed of hyaline cartilage.

Dr. CYRIL OGLE showed a specimen of Carcinoma growing within and close to the bifurcation of the trachea, partly occluding both Bronchi. The bronchial and tracheal glands were infected, but there was no growth elsewhere in the body. The left lower lobe was in a condition resembling grey hepatisation, and the bronchi contained purulent secretion. The growth arose apparently in the mucous membrane, and probably in connexion with the mucous glands.—Mr. BOWLBY suggested included epithelium as furnishing the probable origin of the growth in the mucous membrane.

Dr. ROLLESTON showed Microscopic Sections of a Growth which was removed by Mr. Bennett during the operation of cholecystotomy from the common bile-duct of a woman aged fifty-eight, in St. George's Hospital. The growth was white and somewhat granular to the naked eye and was in immediate relation with an impacted gall-stone. Microscopically it resembled exactly a glandular polypus of the intestine. The papilloma was apparently due to the irritation of the calculus, which, from the history, had been impacted for two months.

Dr. W. H. WILSON exhibited a specimen of so-called Pachymeningitis Hæmorrhagica from a case of phthisis in a woman aged twenty-one. There were no symptoms referable to the central nervous system. In describing the case attention was directed to the engorgement of the cerebral veins, the condition being attributed to the violent cough. The internal surface of the dura mater over both hemispheres was covered by a layer of organised tissue derived from the blood clot, varying from a deep brown to a reddish yellow in colour, localised thickenings being due to extravasation of blood into its meshes. The dura mater itself was apparently unchanged. Cases of this sort had been described in association with general paralysis of the insane and other forms of chronic insanity, in blood diseases accompanied by extravasation, in obstructive disease of the heart and lungs attended with congestion of cerebral veins, and as the result of blows on the head. The present instance was cited as a similar condition resulting from the temporary engorgement consequent upon violent cough, analogous to pertussis.

Mr. S. G. SHATTOCK showed an early specimen of Spina Bifida in which the summit of the sac was formed solely by the flattened substance of the spinal cord; this was invested with long columnar epithelium, the primitive epiblast. The nerve roots arose, as usual, from the portion of the cord

[1] THE LANCET, Oct. 25th, 1890.

involved in the posterior half of the sac. In the nervous substance forming the summit there were groups of large, typical motor nerve cells. He thought that dropsy was necessary for the formation of a sac, as he knew of cases where there was as marked a deficiency in development, but no protrusion.

Mr. D'ARCY POWER showed a specimen of a Congenital Pelvic Cyst growing along the left side of the rectum of a girl aged two months. The pressure exercised by the cyst had led to retention of urine, with hypertrophy of the bladder, dilatation of the ureters, and some amount of hydronephrosis. The action of the bowels had been regular, although the tumour projected into the lumen of the rectum. Mr. Power performed laparotomy two days before the death of the child, but found that the tumour was too firmly fixed to justify any attempt at removing it. At the necropsy the outlines of the cyst were quite smooth and uniform, except at the lower part, where it suddenly tapered off into a thin and delicate cord, consisting only of the lining membrane of the cyst. This cord lost itself in the loose connective tissue lying between the lower part of the rectum and the coccyx. The cyst contained nearly an ounce of thick glairy fluid, resembling unboiled white of egg. Mr. Power had no doubt that the cyst was formed by the persistence and subsequent cystic dilatation of the post-anal gut. He thought that the interest of the specimen lay in the fact that the tumour had grown upwards and within the pelvis instead of backwards, downwards, and outwards, as was more usual; that it had caused retention of urine; that it had no solid contents of any kind; and that it had no connexion with any bone.

Dr. LEE DICKINSON exhibited a case of Single Hydronephrosis with Sarcoma of the Supra-renal Capsule on the same side.

The report of the Council was then read and disclosed a satisfactory condition of the affairs of the society, a larger balance than usual remaining. Votes of thanks to the retiring officers were thereupon passed. The long services of Dr. Cayley as treasurer and Dr. Charlewood Turner's extended period of office as secretary were especially referred to.

The following officers were elected to serve during the ensuing year:—President: Frederick William Pavy, M.D., F.R.S. Vice-Presidents: Thomas Barlow, M.D.; William Selby Church, M.D.; William Smith Greenfield, M.D.; William Miller Ord, M.D.; Alban H. G. Doran, Cuthbert H. Golding-Bird, William Harrison Cripps, and Rickman John Godlee. Treasurer: Sidney Coupland, M.D. Honorary Secretaries: Anthony A. Bowlby and G. Newton Pitt, M.D. Council: Theodore Dyke Acland, M.D.; Thomas Colcott Fox, M.D.; Wilmott Parker Herringham, M.B.; A. A. Kanthack, M.B.; Sidney Martin, M.D.; William Pasteur, M.D.; H. D. Rolleston, M.D.; Charles Scott Sherrington, M.B., F.R.S.; Howard Henry Tooth, M.D.; Dawson Williams, M.D.; Gilbert Barling, M.B.; Stanley Boyd; W. Bruce Clarke; Walter Edmunds, M.C.; E. Hurry Fenwick, C. B. Lockwood, Stephen Paget, Samuel G. Shattock, Charles Stonham, and James Henry Targett, M.S.

CLINICAL SOCIETY OF LONDON.

A Case of Syringomyelia, with Necropsy.—Typhoid Fever in a Diabetic Patient.—Hæmoglobinuria from Muscular Exertion.—A Case of Peliosis Rheumatica.

AN ordinary meeting of this society was held on May 11th, the President, Mr. HULKE, being in the chair.

Mr. J. R. LUNN gave the subsequent history of a case of Syringomyelia which he had shown in 1883 as a peculiar deformity of the hands and shoulders,[1] and a special committee appointed to inquire into the case came to the conclusion that the various lesions were due to a central nervous affection akin to Charcot's disease. The patient remained under Mr. Lunn's care until March, 1893, when he died. In June, 1885, it was noticed that all the muscles of the arms and forearms reacted to faradaic and galvanic stimuli, though there was apparent wasting of the muscles on the flexor surfaces of the forearms traceable to the disease. The muscles of the right thumb did not respond to the faradaic current; those of the left did, however, as did all the internal muscles. The reactions of the muscles of the lower extremities were normal. There was no disturbance of sensation, but occasional fibrillar twitchings were observed. In 1888 the muscles of the legs and right foot were not at all wasted, but the third phalanx of each of the four toes of the right foot appeared to be dislocated on the heads of the metatarsal bones, producing a claw-shaped position, as in the hands. The nails were much wasted and disclosed atrophic conditions similar to those of the nails of the right hand. The left foot appeared normal except in respect of the toe-nails, which were beginning to waste. No nerve symptoms were apparent, and the patient's general health was good. In November, 1889, he began to suffer from girdle pains and attacks of nausea. In January, 1891, he had several attacks of pemphigus on the dorsal and palmar surfaces of the hands, generally preceded by slight rises of temperature. In October, 1891, it was noticed that the wasting of the right finger-nails had increased, accompanied apparently by wasting and shortening of the terminal phalanges. No fresh changes took place except that the patellar reflexes increased, with ankle-clonus, on the right side. While tactile sensibility was quite normal, sensibility to heat, cold, and pain was much impaired and was almost absent over a considerable area of the arms, head, and chest. In the lower extremities slight spastic paralysis was remarked. Sensation of the lower limbs was unaffected, though there was a certain degree of ataxic gait and of unsteadiness on standing with the eyes closed and the feet together. On March 5th, 1893, the patient had a fainting fit of short duration, and the next morning he had a difficulty in speaking. His tongue protruded towards the right side, and the lower half of his face seemed paralysed. The right arm and leg were slightly weak, and the head was turned a little to the left side. Although he appeared to understand what was said to him, and to want to reply, he was unable to do so, his power of articulation being confined to simple words such as "yes," "no," "one," "two," &c. The knee-jerks were much increased on both sides, and the plantar reflexes slightly so. There was no ankle-clonus. On March 7th the patient had considerable difficulty in swallowing; his pupils remained dilated, but acted to light. The legs seemed to be in a state of extensor spasm and could be flexed only with difficulty. On March 10th he lost the power of the right arm and leg and ultimately became comatose, and died on March 12th. Old dislocations of both wrists, left shoulder, right thumb, and outer end of right clavicle were found. There were bullæ on several fingers; some finger-nails were wasted, others absent. There was hypostatic pneumonia. The right lobe of the cerebellum was smaller than the left. The lateral ventricles of the cerebrum were dilated. The left middle cerebral artery was thrombosed, and the cortex to which it went was softened. The central canal of the spinal cord was dilated in the cervical and upper regions. The dislocated joints were typical examples of osteo-arthritis and were so described by Mr. Targett, who had examined them.—Dr. BEEVOR had examined the spinal cord and reported dilatation of the central canal, destroying the ganglion cells in the anterior cornu. He drew attention to the two groups of phenomena—wasting of muscles in the arms and shoulders and of the intrinsic muscles of the hands, and impaired sensibility with trophic changes in the joints, nails, and skin.—Dr. ORMEROD complimented Mr. Lunn and Dr. Beevor on their complete and accurate report of a case which they had watched through so many years. He mentioned two cases in which he had met with syringomyelia post mortem: one a lunatic who presented no clinical symptoms, and the other a boy presenting the general symptoms of a cerebral tumour complicated by acute paraplegia. Both the cerebral ventricles and the central canal of the cord were dilated, but the aqueduct of Sylvius had its normal calibre. Clinical examples of the disease were now more frequently recognised, and he mentioned two cases recently under his care. He thought all cases of chronic muscular atrophy affecting the hands, particularly if associated with a spastic or ataxic condition of the legs, should be investigated with a view to discovering the peculiar sensory symptoms characteristic of syringomyelia.—Dr. F. TAYLOR made some remarks on cases he had observed.—Dr. S. COUPLAND mentioned a case brought before this society in 1872 by the late Dr. Greenhow. It was regarded at the time as one of progressive muscular atrophy, but the cord showed a remarkable dilatation of the central canal. In the light of subsequent knowledge, this case might be regarded as one of syringomyelia, the muscular atrophy being secondary.

Dr. POORE related a case of Typhoid Fever in a Diabetic Patient in a man aged thirty-five, who was admitted to

[1] Transactions of the Clinical Society of London, vols. xvi. and xvii.

University College Hospital on Oct. 5th suffering from diabetes of moderate intensity. He remained under observation for 114 days. On Nov. 16th, while under observation, he developed enteric fever, which lasted six weeks. The attack of fever was without diarrhœa or other serious complication, and might almost be regarded as a case of simple continued fever. An opportunity was thus afforded for observing the effect of the febrile condition on the urinary excreta. During the first week of his stay in the hospital the patient was on the ordinary full diet, but was taking opium by the mouth; the urine for the week amounted to 1218 fluid ounces and contained 7900 grains of urea and 22 218 grains of sugar. During the next five weeks the patient remained in his normal diabetic condition and was put on a rigid diabetic diet. For these five weeks the weekly average of urine was 673 fluid ounces, containing 6118 grains of urea and 3781 grains of sugar. Then followed the period of fever, which lasted six weeks, and during this period (the average temperature for the whole period being 2·2° F. above the normal) the weekly average of urine was 491 ounces, containing 4263 grains of urea and 1214 grains of sugar. The febrile period was followed by a fortnight during which the temperature was subnormal, and it was found that the weekly average of urine was 644 ounces, containing 3577 grains of urea and 989 grains of sugar. During the last fortnight of his stay in hospital, during which the temperature was normal, the weekly average of urine was 537 ounces, containing 6105 grains of urea and 7511 grains of sugar. These figures showed that, although the urinary excreta were diminished during the fever, the period of their greatest diminution was that of subnormal temperature which followed the fever. Complete disappearance of sugar from the urine occurred on the fifth, sixth, and seventh days after complete cessation of the fever, when the patient's temperature averaged 97°. On these three days the urine amounted to 294 ounces and contained 1088 grains of urea *and no sugar*. The numbers seemed to show that the greatest freedom from glycosuria occurred at a time when the needs of the body were great and the patient was rapidly increasing in weight to replace the twenty-four pounds which he had lost during his six weeks of fever. He called attention to the existence of a certain parallelism in this case between the output of sugar and pulse-respiration ratio As the value of R/R declined, so did the output of sugar. One might from this assume that, as the output of carbon by the lungs increased, the output of carbon by the urine diminished. It occurred to him that the condition of the parotid gland in diabetes had, perhaps, not received sufficient attention either at the bedside or in the post-mortem room.—Mr. EASTES observed that the week in January during which the fever and glycosuria were absent corresponded with that in which the external temperature was abnormally low, and asked if in Dr. Poore's opinion this had anything to do with the temporary improvement in the patient.—Dr. COUPLAND asked whether the comparatively low range of temperature in the attack could be attributed to the diabetes. He recalled a case of acute pneumonia in a diabetic, which ran almost an apyrexial course, and terminated in gangrene of the lung.—Dr. S. PHILLIPS, in reference to one point in the case, referred to a patient with acute glycosuria in St. Mary's Hospital, who a week before death developed acute parotitis on each side successively.—Dr. POORE, in reply, said he did not think the external temperature had had anything to do with the patient's condition in January last, as the temperature of the ward was kept up by artificial means and the patient was in bed. The temperatures given were the averages of each week, and he thought that for the fourth week that of 100·8° was undoubtedly high, considering it was an average.

Dr. LEE DICKINSON brought forward three instances of Transient Hæmoglobinuria from Muscular Exertion without serious symptoms. The subjects were healthy young men. In two of the cases the causes were respectively a foot-race of three miles and one mile undertaken in an untrained condition. In the third the attack supervened after a game of lawn tennis. He pointed out that instances were on record in which hæmoglobinuria had occurred repeatedly in the same subject from the strain of military or ordinary walking. Such cases, he suggested, were probably allied to "functional albuminuria," and associated with a condition of abnormal delicacy of the red corpuscles. In these cases, however, the blood was healthy, but the corpuscles were destroyed by some product of the unusual muscular exercise, probably carbonic acid. The symptoms seemed to indicate that the muscular power was out of proportion to the bodily condition.

Mr. MARTIN RANDALL read notes of a case of Peliosis Rheumatica. The patient was a married woman aged forty-one, who for some years had suffered from dyspepsia and diarrhœa. She had been accustomed to take alcohol. There was no history of rheumatism, acute or chronic. On Sept. 2nd, 1893, she was taken ill with pain and swelling of the joints accompanied by a rash, consisting of papules, some pale, most of them hæmorrhagic, varying in size from a split pea to a five-shilling piece. The temperature was about 100° F. Severe diarrhœa and vomiting set in a week later, the motions containing much altered blood, but the vomit was free from blood throughout. The rash continued till death, the old patches fading away and others taking their place. There was œdema, especially of the hands, at times, confined, however, to the region of the affected joints. About a fortnight after the commencement some of the papules sloughed, leaving foul ulcers. She died on Sept. 21st after three weeks' illness. The urine contained a microscopic amount of blood. Post-mortem petechiæ were found on the serous membranes. The lungs were healthy, and there was no sign of endocarditis. The intestines showed many ulcers, commencing in the duodenum and extending to the end of the ileum, but not to the large intestine. The liver, which was markedly fatty, weighed 103 ounces. The kidneys were normal.—Dr. ROSE BRADFORD said the case was not one of erythema nodosum, the papules being found only in the neighbourhood of the joints. Neither was it one of ordinary acute rheumatism; there was no former history of rheumatism, very little swelling and not much pain of the joints. Neither was it one of syphilis; no history of syphilis could be elicited. There were, however, all the symptoms of peliosis rheumatica except submucous hæmorrhage; but possibly the gastric and intestinal ulcerations were due to submucous hæmorrhage and subsequent sloughing of the undermined mucous membrane.

OPHTHALMOLOGICAL SOCIETY.

Periodical Testing of Eyesight in Schools.—Three Cases of Tubercle of the Iris.—Intra-cranial Abscess from Caries of the Sphenoidal Cells.—Rare Form of Intra-ocular Melanoma.

AN ordinary meeting of this society was held on Thursday, May 3rd, the President, D. ARGYLL ROBERTSON, M.D., F.R.S. Edin., being in the chair.

Mr. PRIESTLEY SMITH read a paper on Periodical Testing of Eyesight in Schools. Authorities were agreed, he said, that advantage would accrue from an annual testing of the eyesight of school children, and several Commissions had spoken to this effect and formulated definite proposals. Hitherto no considerable advance had been made towards this end, for the proposals usually put forward had been that the refraction of every scholar should be ascertained once a year by the school physician. It would be a long time before every school had its school physician and every school physician was an efficient oculist. The necessities of the case could be met more easily and would, he hoped, be so met in a large number of schools throughout the country before long. The governors of King Edward VI.'s schools in Birmingham, which comprise about 2200 boys and girls aged from eight to nineteen, had established three years ago a periodical physical examination of the scholars in regard to height, weight, chest measurement, eyesight, and hearing. The eyesight test was carried out by certain teachers appointed for the purpose. It made no pretence of being a scientific proceeding; there was no attempt to estimate refraction or diagnose disease. Any such attempt was worse than useless unless the examiner were an ophthalmic expert. In every case in which the vision in either eye was less than 6–18ths an intimation of the fact was sent to the parent, and with him rested the responsibility of obtaining the necessary advice and choosing the adviser. The Anthropometric Committee appointed at the last meeting of the British Association for the Advancement of Science, having Professor Cleland and Professor Windle for its chairman and secretary respectively, had lately issued an inquiry to a large number of schools as to whether, and to what extent, periodic physical examination of the scholars was in force. From the replies received it appeared that the eyesight was tested in eight out of 483

boys' schools in England, Scotland, and Ireland (Whitaker's list), and in six of 129 girls' schools in England; while colour vision was tested in three only of the whole number. Many of the principals, however, expressed willingness to take up anthropometric work on receiving directions for carrying it out. He laid before the meeting the printed directions which had been drawn up, and which were to be sent, in the first instance, to about 200 schools. The eyesight test included in this scheme was practically the same as already in operation in the King Edward's schools in Birmingham. It involves practically no expense and very little trouble to the school authorities, and it interested at least one teacher in every school in the eyesight of the scholars. In advocating this system he did not in the least undervalue the importance of a thorough medical examination of schools, and he knew that many schools already had duly appointed medical officers competent to deal with errors of refraction, but these were exceptions. By making this simple eyesight test a part of the anthropometric scheme now being so energetically pushed by the committee of the British Association they would, he was confident, attain the desired end in a large number of schools where it could hardly be attained in any other way.—The PRESIDENT considered the proposed scheme would be of great value in throwing some light on the refractive changes occurring in the course of school life. He proposed, in addition, to ascertain the near point of vision with a view to detecting hypermetropia and defect of convergence.—Mr. HOLMES SPICER stated that in one school of 500 pupils which he had examined in the East-end of London he had found that in 40 per cent. of the children acuteness of vision was less than half of the normal. The defects were now being treated, but such an examination occupied a considerable amount of time.—Mr. DOYNE dwelt upon the difficulty of obtaining the near point of vision in children and mentioned the unsatisfactoriness in many cases of leaving the responsibility for remedying defects of vision in the hands of the parents.—Mr SIMEON SNELL attributed the difficulty in obtaining a systematic examination in schools to the want of appreciation of the teachers, which appeared to him to be greater in schools of the higher grades than in the elementary ones.—Mr. PRIESTLEY SMITH, in replying, deprecated incomplete technical examination by the ordinary medical attendant and thought the simple plan of getting the teachers to separate the cases of defective vision for further investigation most useful, as there was a greater probability of its being efficiently carried out.

Dr. ARTHUR SANDFORD read notes of three cases of Tubercle of the Iris. The first two were examples of iritic tuberculous deposits coincident with fresh lung trouble of a similar nature. In one case the latter was a first attack and in the second was a renewal of tuberculous activity in an old dried-up cavity. The third case was one of primary iritic tuberculosis, the ciliary region, suspensory ligament, and apparently the lens itself being infiltrated by the tuberculous elements. The case occurred in a child aged five years, of tuberculous parentage on both sides, whose only brother died of tuberculous meningitis. There was no evidence of tuberculous mischief in any other organ. The globe was therefore excised, and sections were made. The tuberculous mass half filled the anterior chamber. The patient improved greatly in health and had been under observation ever since (eight years). At present she was a fragile, delicate-looking girl, but free from any special ailment.

Dr. ARTHUR SANDFORD also read the notes of a case of Intracranial Abscess arising from Caries of the Sphenoidal Cells. The abscess caused double optic neuritis and subsequent post-neuritic atrophy, with complete blindness, about twenty-seven years before the patient's death, which took place in the Cork District Lunatic Asylum at the age of seventy-eight years. The left half of the skull was exhibited, showing the situation of the abscess, which had penetrated the left orbit, causing proptosis, and also the outer wall of the skull by erosion of the bone. Internally the tumour had raised up and stretched the optic nerves and commissure.—Dr JOHNSON TAYLOR expressed the opinion that the eye should be removed in all cases of primary tubercle of the iris; in secondary tubercle—that is, where other organs are involved—nothing of the kind should be done.—Dr. HILL GRIFFITH said it had been demonstrated in Germany that practically all cases of intra-ocular tubercle were secondary. It was not possible in any given case to say whether the ocular affection was primary or not; he did not think such eyes should be always excised, as in many instances slowly growing tuberculous formations in the iris yielded to treatment and left an eye with useful vision.

Mr. JOHN GRIFFITH read an account of a Rare Form of Intra-ocular Melanoma. After giving a short clinical history of the case he described in detail its microscopic appearances. He considered the tumour to be epithelial, starting in the tapetum nigrum of the retina, the cells having nothing in common with those of sarcoma. The ciliary body was not invaded, but merely displaced inwards by the tumour, which had pushed its way inwards to the lymph space outside the ciliary muscle. Mr. Griffith did not believe that the growth had started from the ciliary gland, but thought it was an instance of a melanoma starting in the retina, and as it was malignant in nature and epithelial in structure it conformed rather to the type of carcinoma, although it possessed many features unlike that class of growth. He saw no reason why epithelial melanomata should not start primarily in either the retina, the ciliary body, or the iris.

The following cases and card specimens were shown:—

Mr. HARTRIDGE: A case of Strumous Keratitis.
Mr. J. A. WARNER: Two cases of Ectopia Pupillæ.
Dr. ARGYLL ROBERTSON: A case of Trichosis Bulbi.
Dr. ROCKLIFFE: A case of Diabetic Retinitis.
Mr. SIMEON SNELL: Spectacles for Entropion.
Mr. MACKINLAY: Cyst of Iris.
Mr. DONALD GUNN: Growth at Yellow Spot.

OTHER METROPOLITAN MEDICAL SOCIETIES.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on Thursday, May 3rd, at 8.30 P.M., the President, Mr. G. EASTES, in the chair.—Dr. BOXALL showed the Product of a Miscarriage at four and a half months from a patient aged forty-three, who might be said to suffer from "habitual abortion." She had been pregnant six times; the first pregnancy terminated prematurely at seven and a half months, the child being born alive, and all the others at four or five months. Dr. Boxall found that every cotyledon of the placenta contained effused blood, the outcome of pre-existing disease of the uterine mucous membrane, which had indeed been found and treated by curetting with only temporary benefit. There was no syphilitic history in this case. Dr. Boxall said that the attributing of abortion to syphilis in so many cases, as was usually done, was most unwarrantable. He was not yet able to say what did constitute a syphilitic placenta.—Mr. BLAND SUTTON read a paper on Cancer of the Colon and its Treatment. He said that surgeons were in the habit of falling into methods of operating, perfecting that method which gave the best results. It was very necessary occasionally to formulate the facts upon which any such method was based. He said that there were clinically two kinds of colic cancer: firstly, one in which the mucous and submucous coats of the bowel became infiltrated with the malignant growth, leading to a constriction of the gut, as if a tape had been tied round it; this was less malignant and occurred later in life than the next variety; and, secondly, the "tuberous" form in which a definite tumour was found and in which the growth infiltrated all the coats of the bowel, and then blocked up the lumen of the gut; this form occurred usually between the ages of thirty and forty. Both kinds were histologically the same, but this clinical distinction between the varieties was very important. Mr. Sutton then described the symptoms of the disease, and explained the "spurious diarrhœa." He said that the gut above the stricture became very dilated and the fluid portions of its contents trickled through until a more solid piece of fæcal matter suddenly blocked up the orifice; then frequently a part of the growth sloughed away and a very copious evacuation took place. The temporary blocking of the orifice explained the apparent constipation which so often alternated with the diarrhœa. The curious lethargic condition of the patient, with fetid breath and deranged mental condition, during this constipation was referred to and shown to be due to the stored-up fæces. The causes of death in colic cancer were next discussed; these were three in number. 1. Death from poisoning from the contents of the bowel. 2. Death from perforation, either above the stricture or in the cæcum, leading to the escape of the contents of the bowel into the peritoneal cavity. 3. Death due to perforation into the inter-muscular planes of the abdominal walls, perhaps through the

mesocolon, leading to extensive suppuration and sloughing. As regarded the diagnosis of colic cancer, the disease never betrayed itself until obstruction occurred, hence the whole clinical aspect of the disease was conjectural; in some cases it might be possible to feel a tumour through the rectum, vagina, or abdominal walls. Mr. Sutton then described the method which he employed in the treatment. The anæsthesia should at first be not deep, then an exploratory incision in the middle line of the abdomen should be made, and the cavity of the abdomen explored with the finger until the seat of disease be found; this could be done by following up the empty gut, beginning at the sigmoid flexure. In this way it could be ascertained where the colotomy should be done—i.e., in which portion of the colon. The preliminary incision should then be closed and the operation of colotomy done. He believed that the lumbar operation (after the preliminary operation referred to above) was the operation of the future. He deprecated so-called "chance" colotomy—that was, colotomy done without being certain where the disease actually was situated—as it so often happened that surgeons did first a left colotomy and found the gut empty; then turned the patient and did a right colotomy; and might then even have to do a median operation in the end. Mr. Sutton quoted cases which showed the importance of this preliminary exploration and mentioned the following advantages of his method: (1) it prevented an unnecessary colotomy; (2) it eliminated the presence of a pelvic tumour, which might be causing the obstruction; and (3) it made certain the fact that one was dealing with a case of colic cancer.—The PRESIDENT attributed the peculiar mental condition of many of these patients to the absorption of toxic substances through the ulcerations found in the distended bowel above the cancerous disease. He had seen a large fæcal extra-peritoneal abscess opened during lumbar colotomy which had been caused by perforation of the colon at a spot where it was not covered by peritoneum. An exploratory incision, such as that advocated by Mr. Sutton, would lead to avoidance of errors in respect of the proper site for operation. In cases of distended stomach and of vomiting he advised the emptying and washing out of the stomach by a long tube before giving the anæsthetic for abdominal exploration. Ether by inhalation was safer than hypodermic injection of cocaine locally. He preferred to divide colotomy into two parts, opening the bowel later if the patient could wait.—Dr. ALEXANDER MORISON, referring to the mental phenomena observed in cases of intestinal obstruction, said he believed that in a certain number of cases the phenomena in question were exaggerated by the cumulative effect of belladonna given alone or in conjunction with opium. He thought belladonna generally outran opium.—Dr. BOXALL had often had the opportunity of observing in lying-in women the peculiar fact, still awaiting a complete explanation, that fæcal accumulations, as long as they are left undisturbed, are comparatively innocuous; but as soon as a successful attempt is made to dislodge scybala from the bowel unpleasant symptoms, often accompanied by fever and not infrequently by urticarious eruptions, are apt to ensue.—Mr. BEALE thought that the symptoms following fæcal accumulations were due to absorption into the blood of albumoses produced during the life of micro-organisms. There was in all probability an extensive, though not deep, ulceration of the mucous membrane of the bowel which was round the scybala, and thus the poisonous material easily entered the blood stream.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society held on May 5th, Mr. W. H. BATTLE read a paper on two cases of Traumatic Rupture of the Liver without External Wound. In the first the patient recovered without operation, shock being extremely severe and prolonged; the right kidney was injured, and later pleurisy set in; the pleura was aspirated and contained blood and bile, the fractured ribs having injured the diaphragm and liver. The second patient was operated on, but no lesion was detected; the abdominal cavity was cleansed; the patient died two days later, and at the necropsy a large posterior rupture of the liver was found.—Mr. ECCLES asked if a high median incision sufficed to remove blood from the whole cavity.—Dr. H. MACNAUGHTON JONES read a paper on Rest, Physiological and Therapeutical, in the Treatment of Eye Affections. He dealt with the reflexes and their origins, as uterine, nasal, &c., with an anatomical *résumé* of the vascular system. He then discussed the physiology of the eyelids and the various more usual forms of treatment.—Mr DUNN, Dr. POPE, and Mr. LYNCH took part in the discussion.—Mr. G. C. WILKIN read a paper on Epithelioma of the Ear treated with Injections of Pyoktanin. The patient, whose left pinna was very prominent, had a large swelling in front of the ear, and the skin over the mastoid was adherent and discoloured. Pyoktanin injections (1 in 500) were used, and were changed first to 1 in 300 and then to 1 in 100. The growth hardened and became more defined after the injections, and the pain was immediately relieved. Death took place sixty-five days after the first injection, and at the post-mortem examination no epithelioma was found in the tissues in front of the pinna.—Drs. POPE and EDDOWES and Mr. ECCLES discussed the paper.

PROVINCIAL MEDICAL SOCIETIES.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on May 3rd, Dr. EWART, President, being in the chair.—Dr. GORDON DILL showed a Chlorotic Girl with Two Verrucoid Patches on the Tongue. These were white, soft, slightly raised, and thickly studded with a papillary growth.—Dr. WHITTLE showed the Right Humerus of a boy aged six. The patient knocked his arm against the bed-post on Jan. 26th, and the next day pain and tenderness developed just above the insertion of the right deltoid. Every movement of the shoulder and arm could be gone through passively without pain, but he was loth to perform the same actions himself. There was a small sore on the right heel stained with the colouring matter of the stockings. The boy became very ill, delirious, temperature 102°F., pulse 160, tongue dry and brown, lips dry with herpes, and the right arm markedly swollen. Severe fetid diarrhœa, and secondary abscesses developed in both parotids and in the glands of the submaxillary region. On the 30th an incision was made into the periosteum and some pus escaped, but the temperature did not fall, and the boy died on Feb. 1st.—Post mortem the periosteum was quite stripped off the shaft of the bone from the epiphysial line above to just above the epiphysial line below. Inflammation was most severe at the anterior border and external surface of the shaft, near insertion of deltoid. On taking out the bone the head was accidentally separated and, too, showed signs of inflammation.—Dr. HINDS read notes of an unusual case of Pulmonary Emphysema. A man aged twenty-two, an agricultural labourer, mostly employed in carting, had never had any illness; family history good. First seen in October, 1892; had been "feeling poorly" for about a week and had "shortness of breath." He was cyanosed, breathing quickly; pulse about 80, small; temperature 98·4°. Chest everywhere resonant and breath sounds well heard. Cardiac dulness diminished, impulse not well felt. No cardiac murmur. Voice clear, though weak. Bowels regular; urine natural. He got worse, and had attacks of dyspnœa more frequently, and in one of them died in January, 1893. He had occasionally complained of pain on both sides, and at times his temperature was a little raised. Necropsy: on removing the sternum the lungs bulged into the opening; the heart was covered. On the right side in front there were pleural adhesions; on these being broken through there was a sudden escape of air from the pleura, and the lung fell back into the chest, showing that a pneumo-thorax had been opened. Both lungs were much enlarged, and emphysematous all over; at the apices and the anterior borders there were vesicles as large as pigeons' eggs. On section the lung was like coarse sponge. Microscopical examination of the lung was made by Dr. Arkle, pathologist at Charing-cross Hospital, who reported as follows: "The organ is profoundly altered, having well-marked interstitial pneumonia at parts. The structure is invaded by a fungous growth, not only in the small bronchi and alveoli, but invading the substance of the lung, alveolar walls, and septa. It consists chiefly of mycelium, but I am not at present prepared to state whether it is an aspergillus or mucor." Attention was drawn to the sudden onset in a young man of extreme emphysema, proving fatal in four months. The chest did not assume the form of extreme emphysema. It was suggested that rupture of the distended vesicles had caused a temporary pneumo-thorax, and this accounted for the attacks of dyspnœa. In the absence of any other cause it was held that the nutrition of the lungs might have been affected through their trophic nerves, which had caused softening of the walls of the vesicles; but the discovery of the fungous growth by Dr. Arkle rendered it probable that the case was a very unusual form of pneumonomycosis. The obviously

diseased condition negatived the idea that there was simply a congenital malformation of the lung.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on April 27th, Mr. D. CORBET, Vice-President, being in the chair.—Mr. J. LIONEL STRETTON read notes of a case of Extra-uterine Fœtation. The patient, aged twenty-seven, had been married seven years and had four children; no miscarriages; last menstruated a week before Christmas. On Feb. 14th, when walking across the yard, she felt a sudden pain in the lower part of the bowels and fainted. Dr. Robinson saw her and advised her removal to the hospital. On admission, at 4 P.M., patient was deadly pale, extremities cold, pulse almost imperceptible. She complained of pain at the lower part of the abdomen, where a distinct fulness was felt, which in places appeared nodulated, the right side being fuller and more tender. At 5.30 P.M. ether was administered and the abdomen opened by an incision three inches long in the middle line; a large quantity of blood and clot was cleared out—about three quarts. The hæmorrhage was found to come from a small pin-hole rent in an extra-uterine pregnancy of the right Fallopian tube close to the uterus; this was ligatured and removed, together with the ovary. During the operation three pints of saline solution were injected into the left median basilic vein with marked benefit. The operation was rapidly performed and the patient returned to bed. She rallied for a time, but never fully recovered from the shock of the primary rupture and died forty hours after the operation. Necropsy (six hours and a half after death): no signs of peritonitis; the uterus was enlarged and contained a decidua. The specimen removed at the operation was shown, the ovary exhibiting a well-marked Graafian follicle.—Mr. W. HODGSON MOORE showed a case in which a Compound Fracture of both Bones of the Forearm had occurred in a child aged six. It was not seen until eight days after the accident, when there was a considerable amount of suppuration and a large surface of both bones was found to be bare. Free incisions were made and the arm was put up in splints. There was very little deformity and the bones have united firmly, allowing free movements.—Mr. J. L. STRETTON showed an Ankle-joint removed in the afternoon. There were erosion of the cartilages and a large patch of caries on the upper surface of the astragalus, a smaller one on the posterior surface of the tibia, and thickening of the synovial membrane, due to tuberculous disease. This had existed several months, and previous incisions had been made; but thorough examination failed to discover the destructive changes in the joint, which were only detected by laying it freely open prior to amputation, and even then the carious patch on the tibia was not apparent. Mr. Stretton emphasised the point that in many cases it is impossible to discover dead bone without very free exploratory operations, which should always be undertaken in suspected cases.—Dr. EVANS read a paper on Tuberculous Peritonitis. He sketched the history of the disease from 1763, and contrasted the theories of its etiology and pathology of that date with those of to-day. He described in detail its symptoms and physical signs, mentioned the various methods of treatment which had been from time to time adopted, and advocated a more frequent recourse to early abdominal section, especially when the abdomen contained fluid, while maintaining that some cases, particularly those of a plastic nature, were curable by medicinal treatment. An interesting discussion followed.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society on May 2nd, Dr. WALTER HUNTER, President, being in the chair, Mr. CHICKEN showed: 1. An elderly man who had suffered for some considerable time from Pain in the Right Thumb and Peculiar Sensations there, but whose symptoms were entirely removed by trephining over the thumb area, where the bone was found much thickened. He had used for the operation a V-shaped chisel, which he thought a valuable instrument. 2. An old man who had had an Epitheliomatous Ulcer of the Ear and adjacent skin. The growth had completely disappeared and the ulcer healed under the influence of calomel and iodoform dressings. Dr. Cattle exhibited a microscopical specimen of a portion of this growth which he had prepared, and which had been removed by Mr. Chicken for this purpose. 3. A healed Compound Fracture of the Arm and Forearm in a young man. The injury was caused by a tramcar accident. The humerus had been broken in two places and the bones of the forearm also in two places, with much skin laceration. 4. A case of Lupus Erythematosus in an elderly woman which was almost completely cured under the influence of a treatment which consisted in first painting the part with a solution of permanganate of potash, then with hyposulphide of soda solution, and then with dilute hydrochloric acid. Mr. Chicken thought the beneficial effects accrued from the action of nascent sulphur, which was by this means generated in the tissues.—Messrs. ANDERSON and BURNIE and Drs. CATTLE and HUNTER spoke on these cases.—Mr. CHICKEN further showed a Pathological Specimen of an Intussusception which he had removed by Enterectomy.—Mr. CHICKEN then read a paper on the Operation for the Radical Cure of Hernia. He advocated strongly: 1. The period of infancy as the most suitable time for the successful performance of the operation. He deprecated entirely the use of pressure and trusses in congenital hernia. The union was insecure and the cure apparent only. 2. Ligatures and sutures should be boiled in carbolic solution and allowed to cool *in* the solution, thus drawing the sterilising medium into the remotest fibres of the material. 3. That flax is preferable to silk; no old ligatures or lengths brought from one operation should go to another, but the reels should be emptied previously to each operation and the new ones freshly sterilised immediately before the operation.—Dr. WATSON showed a Dermoid Cyst of the Ovary and also a Fallopian Tube with Double Abdominal Ostium.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Some Points in connexion with the Administration of Hospital Relief.—Demonstration of the Typhoid Bacillus in Drinking Water.

A MEETING of this section was held on April 20th, Mr. FLINN, President, being in the chair.

Dr. H. C. TWEEDY read a paper on Some Points in connexion with the Administration of Hospital Relief. He dwelt chiefly on two points—viz., the unscrupulous use made of the pay wards and of the out-patient departments by the better class of patients. As a remedy for the former he proposed a much stricter supervision of cases admitted to hospital than that practised at present, and also the establishment of private hospitals worked independently and containing accommodation for first-class, second-class, and third-class patients, at rates varying with the accommodation afforded, all patients being entitled to the services of the resident medical officer and being at liberty to call in any medical man they wished at their own expense. In respect of the out-patients he pointed out the provisions made for the out-door medical relief of the poor—firstly, in the Poor-law dispensaries, and, secondly, in the hospital dispensaries, showing that more than 48 per cent. of the population of Dublin and its suburbs, rich and poor, received gratuitous advice, and also that about 60,000 persons each year obtained medical advice free, entailing a cost of £4500 on the Dublin hospitals. He suggested as remedies a more accurate registration and admission to the dispensaries by ticket only.—Dr. GRIMSHAW said that, although everybody admitted the facts Dr. Tweedy had stated, it was very difficult to see how they were to be remedied.—Mr. COX thought that one of the best ways to remedy this state of affairs was to give as much publicity as possible to Dr. Tweedy's paper. No doubt a great abuse existed. Frequently artisans earning £2 a week were admitted as patients into hospital. Frequently 30*s.* of the £2 went in drink, and during the time of the patient's stay in hospital the wife and children had to be supported by charity or out-door relief, and, in the event of the patient's death, became a permanent burden on the public. He also thought there should be more coöperation between the dispensary and hospital staffs. Very often dispensary medical officers found it necessary to have patients sent to hospital on account of being unable to get proper treatment for them in their own miserable homes. Members of the hospital staff did not always keep this in mind.—Dr. HEARD said that the plan adopted in Monkstown Hospital was found to answer very well. Admission to the hospital or the dispensary was by ticket. Tickets were given to subscribers at the rate of twelve for £1 1*s.* The subscribers distributed them to needy people with whom they were acquainted as necessity arose. A local medical practitioner also could recommend a case to hospital, and if there was a vacancy the patient was admitted.—

Mr. DOYLE said that it was not the very poor who came to the general hospitals for relief—they went to the union hospitals. The Poor-law institutions had been started to supply a want which now no longer existed, as it was supplied by the general hospitals. He thought, therefore, that eventually the Poor-law institutions would have to be abolished.—Dr. SMYLY said he thought that the in-patient abuse of hospitals by well-to-do people bore very heavily on specialists.—Dr. KIDD thought that the subject might be very fittingly brought forward at the next annual meeting of the Dublin Branch of the British Medical Association.—DR. TWEEDY briefly replied.

Dr. MCWEENEY read a paper on a specimen of Pump Water from a small village near Waterford in which a severe outbreak of enteric fever had occurred. Dr. W. R. Morris, who had had many of the cases in his practice, suspected the water and sent a specimen of it to Dr. McWeeney. The pump was surrounded by manure heaps, and "slush" had been emptied into it with a view to make it work. Plate cultivations on gelatine at 22° C. were speedily destroyed by the numerous liquefying colonies present, so recourse was had to Parietti's method, by which positive results were at once obtained. The Parietti tube, on being plated out, proved to be pure cultivations of Eberth's bacillus, and the result was checked by microscopic examination and culture in potato and in broth to which glucose and lactose had been added according to the plan proposed by Theobald Smith. Dr. Morris's suspicion had thus been fully justified. The journals did not seem to contain, so far as he had had time to consult them, a similar case occurring in the British Islands. Circumstantial evidence, more or less conclusive, had been adduced in many cases, but it had not been raised to the level of certainty by the positive result of bacteriological examination.—Dr. THOMPSON asked if it was necessary that putrefactive changes should be taking place in the media in which the typhoid bacilli were for the latter to have the power of causing typhoid fever in a person.—Dr. E. J. FLINN alluded to the injurious habit prevalent in many villages of throwing soiled and impure water down pumps to start their suction power. He had lately investigated an epidemic of typhoid fever in which he believed this to have been the cause.—Dr. MCWEENEY, in reply to Dr. Thompson, said that this opened up a wide and difficult question. Some members of the French school held that the bacterium coli commune, when growing for some time in sewers and similar media, was the organism which caused typhoid fever.

SECTION OF PATHOLOGY.

Exhibits.—Case of Head Injury illustrating some Points in Cerebral Topography.

A meeting of this section was held on April 27th, Mr. SCOTT, President, being in the chair.

Dr. W. H. THOMPSON exhibited a fresh Fœtus with Malformation of the Posterior Part of the Head and of the Neck.—Dr. STORY wished to know whether the specimen was considered to be an exaggerated instance of spina bifida, in which the non-closure existed in the occipital region.—Dr. NIXON suggested that a careful dissection should be made.—Dr. THOMPSON briefly replied.

Mr. NORMAN showed a Microscopic Preparation of a Sarcoma of the Kidney.

Mr. F. ALCOCK NIXON read notes of a case of Head Injury illustrating some points in Cerebral Topography. He said that he had examined the scalp with care, and could not find any external sign of injury. On cutting into the scalp post mortem he found a clot in the occipital region corresponding to the internal injury.

Dr. R. H. WOODS exhibited a specimen showing Tertiary Syphilis of the Larynx. The patient from whom it was taken contracted venereal disease at the age of twenty, and a year later was tracheotomised in the Richmond Hospital for stenosis of the larynx, caused by gummatous infiltration of the false vocal chords. After some weeks' treatment and rest the swelling subsided, the tube was removed, and the patient discharged. In spite of the caution he received on his dismissal he drank heavily and exposed himself by sleeping out of doors, with the result that a few weeks later he was brought to hospital almost asphyxiated. Tracheotomy was again performed and the tube left permanently in. Twelve months later he died from acute pneumonia. The larynx at its junction with the trachea was so stenosed as scarcely to admit the passage of a goosequill. There was no ulceration.

Reviews and Notices of Books.

Lectures on the Comparative Pathology of Inflammation. By ELIAS METCHNIKOFF. Translated from the French by F. A. Starling and E. H. Starling, M.D. London: Kegan Paul, Trench, Trübner & Co., Limited. 1893.

THIS volume comprises twelve lectures delivered at the Pasteur Institute in Paris in 1891 by Professor Metchnikoff, and they traverse the whole line of study which he has pursued in the elucidation of the process of inflammation. The subject is a fascinating one; indeed, there is no chapter in science more romantic, if one may venture to use the term in this connexion, than that of phagocytosis. Whatever may be its ultimate fate, it is clear that the introduction of this teaching has extended our ideas of the nature of inflammation beyond the point attained by Cohnheim. Not only so, but the same root idea of the independent action of the cells of the organism and their almost conscious resistance to bodies that have an injurious effect on the vitality of the whole has been equally applied to the interpretation of the phenomena of infectious diseases. It is not far from the truth, perhaps, to assert that he who solves the riddle of inflammation has in his grasp the key to most of those pathological problems that still baffle the investigator.

Professor Metchnikoff, by his researches into the vital phenomena exhibited by the lower forms of animal life, was led to contrast these with the actions of the cells in the higher animals, and by so doing he has demonstrated how valuable is the study of comparative pathology. The process which we term "inflammation" in animals that possess a blood-vascular system has its counterpart in those simpler organisms that are destitute of this apparatus. Is it, then, true that the cardinal and essential factors of the inflammatory process are to be found in changes in vessel-walls or in disturbances of the circulating medium? This, we take it, is the question which Professor Metchnikoff has set himself to answer in the negative, with a wealth of fact and argument, and a clearness of style and diction, that go far to carry conviction. To follow the steps of his reasoning would lead us far beyond reasonable limits; but we may venture to say that the book is one which will compel admiration, and one which cannot fail to interest the reader. Step by step the author leads us through the animal scale, and we have unfolded to view the increasing complexity of structure, with the same general underlying principles of function. The book is one which will interest all members of the profession, to many of whom "phagocytosis" may have seemed as but the shibboleth of a pathological sect, and who may never have had the opportunity of grasping its full import. By them, as by the working pathologist, these lectures are sure of a hearty welcome; whilst the excellent manner in which they have been translated enables the reader to profit by them as fully as if he had been present at their delivery.

The Students' Introductory Handbook of Systematic Botany. By JOSEPH W. OLIVER, Lecturer on Botany and Geology at the Birmingham Municipal Technical School. London: Blackie and Son. 1894.

As Mr. Oliver rightly implies, the value of a book depends rather upon the completeness with which it meets the wants of the class for whom it has been written than upon its actual contents or the extent of its omissions. This manual has been specially designed for students who have passed through some such preliminary course as is laid down in the author's previous excellent text-book, "Elementary Botany," so that he considers himself to be addressing readers possessed of a fair amount of general knowledge of vegetable morphology and physiology, of plant structure, and the principles of plant classification. To

these more advanced students the arrangement of the present book, by which the unicellular organisms and cryptogams precede the more complex forms—the phanerogams—will prove no stumbling block. It is the more distinctly biological treatment of the subject, and as such will appeal to them, as they should be already masters of the outlines of the science. But to the entirely ignorant a text-book in elucidation of a system of botany would certainly be the better for beginning with the more familiar flowering forms of plants, leaving the minute biological and microscopic differences between the algæ, the fungi, the musci, and the filicineæ until the end of the course. Mr. Oliver's arrangement, however, is justified by his assumption that his readers will understand his method.

The modern system of the classification of plants forms a curious and instructive commentary upon the manner in which a science is evolved from generations of learning by the preservation of what is sound and the neglect of what will no longer tally with increased knowledge or hold good under improved methods of investigation. Undoubtedly Linnæus did immense good by his laborious system of classification; yet this was quite artificial, and, being based entirely upon the number and arrangement of the stamens (whence it is called the sexual system), was, of course, almost entirely devoted to consideration of the phanerogams. The system is now, as everyone knows, only of historic interest, the Jussieus, Brown, Lindley, Hooker, and Bentham having by their labours enabled us to arrive at the modern or natural system. But, undoubtedly, the original work of Linnæus formed a point in classification from which the subsequent workers started, while his labours in description and nomenclature made their task infinitely lighter. Now we see in Mr. Oliver's book yet a further departure from the old Linnæan pre-eminence of the flowering plant. It has until recently been usual to divide the vegetable kingdom into two great groups—the cryptogams, or flowerless plants, and the phanerogams, or flowering plants. But the researches of the last quarter of a century have shown that the variations in structure and modifications in the reproductive processes in the cryptogams are vastly greater than in their more conspicuous companions, who can therefore no longer be regarded as their equals in importance. Hence the modern arrangement is into five principal groups, whereof the first three—the thallophytes, the bryophytes, and the pteridophytes—were formerly comprised under the head of cryptogams; the fourth, the gymnospermæ (firs, larches, &c.), can as properly be classed with the cryptogams as with the phanerogams; and the last, the angiospermæ, comprises everything that ancient botany took cognisance of. Mr. Oliver gives to each class the amount of space that it merits under modern methods of botanical work, and contrives to be very readable as well as quite clear. In short, this new introductory manual to systematic botany—which, by the way, is very well illustrated—seems to us to form an admirable text-book.

Ueber den Schmerz, in physiologischer und klinischer Hinsicht. Von Dr. ALFRED GOLDSCHEIDER &c. Berlin: Hirschwald. 1894.

THIS essay on Pain, from a Physiological and Clinical Point of View, is the outcome of a lecture delivered before the Society of Military Surgeons in Berlin. The author commences with a consideration of the nature of pain and remarks that we ought to be ashamed that we know so little about a symptom which constitutes the chief part of all the bodily ills of humanity. After rejecting the idea that pain is due merely to an increase of the stimulation of the central ganglion cells he affirms his adhesion to the view that "pain is a peculiar kind (*qualität*) of sensation, not a general modification of all the different kinds of feeling." He denies the correctness of a theory of specific pain-nerves and believes that the pain-sensibility resembles the nerves of the sense of weight and of general sensibility. In discussing the causes of pain the author enters with some detail into the peripheral conditions which have been experimentally induced, and also into the data which constitute such knowledge as we possess of the central causes of this symptom. More especially is reference made to the investigations of Woroschiloff, W. Koch, and Martinotti on the nature of hyperæsthesia. These observers found, with more or less agreement in their results, that the removal of portions of the lateral columns of the cord bordering on the grey matter of the cornua, especially of the posterior cornu, causes hyperæsthesia. Finally, the two causes of pain arrived at are the exit (*ausfall*) of tracts in the spinal cord, and an original (*autochthone*) condition of irritation. In other words, nerves to feel with and pain to feel. The author has carefully and scientifically arrived at this conclusion, and it is only the superficial who will smile at his not having solved the problem completely, or in a very novel manner. In considering the kinds of pain he practically adopts Erb's classification into such pains as those of a burning character, due to a fusion of sensations in the sphere of the senses; stabbing or shooting pains, which indicate localisation or distribution; and beating pains, which indicate an alternation in the stimulative process. Dr. Goldscheider further treats of pain as a symptom of disease; of its diagnosis—not always an easy task; and of its treatment. Space forbids our examining these aspects of the question at greater length. He calls pain under certain circumstances the "friend of humanity" and the "mightiest helper of the physician," and concludes a careful study of the subject in the following eloquent words: "Pain is a hard and useful law of nature; but, like every natural law, it is unbending in its consequences, and in its want of consideration blind, and therefore brutal and cruel. It appears not only as a benevolent warner but as a useless tormentor. Pain arises even in incurable diseases—even, that is, in diseases in which the sense of malaise is of no use to man, as we cannot influence the disease—and pitilessly destroys the enjoyment of life without any bodily advantage as a compensation. Thus it is our duty as physicians to fight our comrade. Care has, however, been taken that we shall not expel him from the world. But we cannot, and would not, be too hard upon him. For not only do we require his aid as an admonisher in our contest with the inimical forces of matter, but also as a rouser of ethical impulses; in the remembrance of pain, whether bodily or mental, pity and a helpful love of humanity have in a great measure their roots."

Darwin was struck with the apparent want of sympathy for suffering among some of the lower animals; but, as we cannot speak their language or interpret their gestures fully, it is perhaps hazardous to come to a conclusion on the point. All that feel must suffer, and all that suffer must pity. Man, with his usual supremacy in virtue and in vice, may pity most or least, and, we are disposed to believe, may very frequently receive useful instruction from the benevolence of the lower animals.

L'Eau Minérale de Contrexéville. Par le DOCTEUR MABBOUX. Paris: Société d'Éditions Scientifiques. 1894.

THIS work is an exhaustive account of the important spa in the Vosges, the reputation of which, long assured in France, has in recent years made great progress amongst ourselves. Dr. Mabboux traces the fame of Contrexéville to a remarkable cure effected there in the year 1759 of a young girl the subject of vesical calculus. Thouvenel, the physician of Louis XVI., reported very favourably of the spa a few years later, and from 1775 to 1789 it enjoyed a considerable popularity. This was interrupted by the French Revolution, but about the year 1825 Civiale again directed attention to the value of the Contrexéville waters in affections of the

urinary organs, and many patients made a successful trial of them. In recent years Contrexéville has enjoyed a large share of popularity in the treatment of gout and gravel. The village is situated at the bottom of a narrow valley, opening from north to south, and its elevation above sea level is 342 metres. The soil around it is composed of Muschelkalk, a triassic stratum, and the waters are characterised by a low degree of mineralisation, the chief ingredients being sulphate and carbonate of lime, with small quantities of sulphate of soda and carbonate of magnesia. The amount of mineral is from 2 to 3 parts in 1000. The principal spring (Source du Pavillon) has a temperature of 11·5° C. It is limpid and odourless and has a specific gravity of 1025. Its reaction is only very faintly alkaline. According to Dr. Mabboux, the physiological action of the Contrexéville waters is stimulant, diaphoretic, diuretic, and in full doses purgative. It is claimed for them that they remove mucous secretion from the renal tubules and ureters, dislodge gravel, and render smooth the rough surfaces of certain kinds of calculi. The treatment consists of certain preliminaries (especially the regulation of the bowels &c.), the imbibition of the waters, baths and douches, and friction and massage. The amount of the water imbibed varies from a very small quantity to as much as three or four litres daily. The water is drunk chiefly at an early hour in the morning, and the matutinal dose is followed either by regulated exercise or by rest in bed, according to circumstances. Gout with its various manifestations is the chief disease said to be benefited by the Contrexéville waters, but it is especially gouty affections of the urinary organs that seem most amenable to the treatment. Dr. Mabboux divides the several varieties of gravel into two categories—(1) *gravelle diathésique primitive*, of which the varieties are uric, oxalic, and phosphatic gravel; and (2) *gravelle catarrhale, secondaire, symptomatique d'une inflammation des voies urinaires*, which is always phosphatic. It is the uric acid gravel that the Contrexéville waters especially benefit. Dr. Mabboux does not claim that the waters dissolve uric acid calculi, which he admits to be impossible, but he believes that they materially help the expulsion of these calculi. To quote his own words: "Il est certain qu'il n'y a pas dissolution (au sens propre du mot) des concrétions uriques par l'eau minérale qui les baigne; mais cette eau peut réduire leur volume, ce qui revient au même au point de vue des facilités d'expulsion, en ramollissant, en dissociant le ciment muco-épithélial qui réunit les grains de sable, en désagrégeant et émiettant les couches superficielles, en émoussant les aspérités." Dr. Mabboux has written an interesting book giving a very adequate picture of an important department of practice. We cannot read his pages, however, without an occasional smile at the unvarying confidence and precision which characterise his volume. He defines to a nicety what cases Contrexéville will cure, and precisely the proper line of medication to adopt. If disease ran in such nicely arranged grooves it would solve many a tough therapeutic problem, but unhappily our experience does not in this matter correspond with that of Dr. Mabboux.

LIBRARY TABLE.

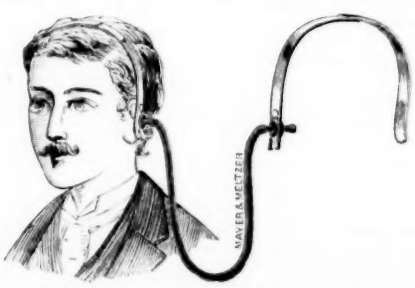
Outlines of Gynæcological Diagnosis for the Use of Students and Practitioners in making Examinations. By N. T. BREWIS, M.B., C.M., F.R.C.P. Edin., Lecturer on Gynæcology, Edinburgh School of Medicine, &c. With Illustrations. Edinburgh: William F. Clay, 1894—This is a little book consisting of sixty-eight pages of large print, divided into six chapters, and illustrated with twenty figures. Although the author speaks of his work as a book, it appears to us that as a *book* it scarcely justifies its existence, though it might have reasonably formed a chapter on the methods of physical examination in a text-book of gynæcology, and it seems to offer no advantage in the information given over that to be found under that heading in the numerous excellent text-books in common use. We observe a few statements to which some exception may be taken: thus it is not quite right to say, as stated, that in the unmarried one finger can generally be inserted into the vagina for examination without injury to the hymen, though, of course, it is so in a certain number of cases; nor do we think that Fergusson's speculum can rightly be described as "self-retaining"; nor is Récamier's curette, at least as regards the pattern generally sold in London, provided with a sharp cutting edge; and why does the author, over and over again, speak of the speculum invented by Marion Sims as "Sim's speculum"?

The Physician's Wife and the Thing that pertain to her Life. By ELLEN M. FIREBOUGH.—Philadelphia: The F. A. Davis Co.; London: F. J. Rebman. 1894.—As this little work, though many of the incidents may be rather *ben trovato* than *vero*, is clearly autobiographical, it would perhaps be ungallant to say that we do not find portrayed in its pages the ideal wife of the physician. The style is easy and colloquial, the teachings are obvious, and some of the passages throw light upon provincial medical practice in America, and will enable those interested in the matter to guess how far the transatlantic practitioner is better or worse off than the English. As a matter of fact, in England we have no use for such a book as this—to use the inevitable Westernism—whatever the Æsculapian society of the Wabash Valley, Illinois and Indiana, U.S.A., at whose instigation the issue has been undertaken, may have. All rightly constituted people with us believe that a man's wife should be his helpmate—a physician's wife as much as any other man's wife, and no more. And we do not need a book to urge this. We are very clear indeed on one point—that anything like taking an intelligent interest in their husbands' medical studies is not to be recommended to the majority of physicians' wives. Of course there are exceptional cases, but the rule is as we have stated it.

New Inventions.

AUSCULTATION TUBE.

To avoid any shifting of the nozzle of the auscultation tube and any irritation of the meatus, resulting from frequently screwing the plain nozzle into the ear in attempts to fix it, Messrs. Mayer and Meltzer, of 71, Great Portland-street, have made for me the simple contrivance represented in the cut. It consists of a light, nickel-plated, metal spring, hinged in the middle, having at one extremity a small catch



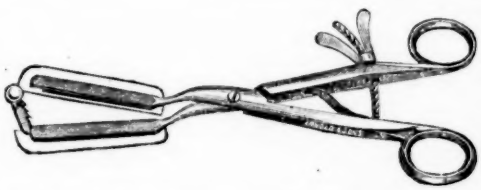
which holds the nozzle (the nozzle being made of wood covered with a removable nipple of soft rubber), the other extremity plain, for resting lightly on the head. It fits either ear, is extremely comfortable, and, when the spring is

folded and the nozzle removed from the catch, takes up very little room. The spring for the patient is not nickel-plated, and the nozzle for hospital work is better plain wood for cleanliness sake, a white bone one being used for syphilitic cases.

Harley-street, W. ARTHUR H. CHEATLE.

IMPROVED PILE CLAMP.

THE clamp and cautery operation for the removal of hæmorrhoids has now been very extensively practised for many years. My own experience is greatly in favour of the method, and in a large number of cases I prefer it to the ligature. The operation is usually followed by very little pain, and the patient is able to resume the duties of life more quickly than after any other kind of surgical treatment. The engraving represents my clamp, which is only a modification of the instrument used by the late Professor Henry Smith, to whom we are mainly indebted for the introduction



of this simple and efficient practice. The ivory plates are very broad, and near the extremity of the clamp a short lever is attached for the purpose of holding the blades accurately in position, and also for preventing the strangulated mass from slipping out of their grasp. The instrument is provided with a quick-travelling screw which much facilitates the opening and shutting movements. The clamp has been made for me by Messrs. Arnold and Sons of West Smithfield.

J. WARD COUSINS,
Senior Surgeon to the Royal Portsmouth Hospital and the Portsmouth and South Hants Eye and Ear Infirmary.

ARMY MEDICAL REPORT FOR 1892.

[FIRST NOTICE.]

WE have received a copy of this report, which has been laid before the Houses of Parliament, and is now published. The volume is issued from the Medical Division of the War Office; it is dated 1894, and makes its appearance somewhat earlier than usual. We presume that it has been found impossible to publish these reports at any earlier date, but their appearance so long after the facts and occurrences they record, and subsequent to the issue of the report of the Sanitary Commissioner of the Government of India, and that for the Navy, robs them of a good deal of interest.

The average strength of the troops serving at home and abroad in 1892 was 199,049 warrant officers, non-commissioned officers, and men (exclusive of colonial corps); the admissions into hospital in this force were 206,034 and the deaths 1902. The rates represented by these numbers are for admissions into hospital 1035·1 and for deaths 9·46 per 1000 of the average annual strength, the latter being calculated on a strength of 200,984, which includes detached men.

On reference to the table of ratios to strength for the year 1892 we find that in the United Kingdom the admissions were 761·3, the deaths 4·38 per 1000; in Gibraltar these were 681·5 and 3·24, in South Africa and St. Helena 969·5 and 5·61, and in Canada 453·3 and 1·44 per 1000 respectively. It will be seen that these are the commands or stations giving the lowest admission- and death-rates for the year under review, whereas among the highest in these respects are the Mauritius, where the admission-rate was 1066·0, the death-rate 17·86 per 1000, with an invaliding-rate of 50·0 per 1000; Egypt, where the admission-rate was 1019·3 and the death-rate 14·18 per 1000; India, where these rates were 1514·7 and 17·59 respectively. China, the West Indies, Straits Settlements, and Malta occupy what may be termed an intermediate position. For information as to the causes of these differences and the diseases to which they were attributable reference must, of course, be made to those sections of the report dealing with the respective commands and stations, and to some of these we shall refer subsequently. For the present our purpose is to analyse as succinctly as practicable some of the facts and figures set forth in the report as indications of the general health of the army in 1892.

In the United Kingdom, as a whole, the admission and death-rate show a decline, as compared with 1891, of 10·9 and 0·56 respectively, and the constantly sick-rate an increase. Compared with the previous decennium, there is a decrease of 48·2 in the admission-rate, 1·35 in the death-rate, and 2·68 in the constantly sick-rate. The number of men discharged from the service as medically unfit during the year was 1470, being in the ratio of 14·38 per 1000, which is slightly below the previous year's rate and below the decennial rate by 3·81. In England and Wales there were 1050, in Scotland 72, and in Ireland 348 men discharged as invalids during the year. It would be interesting, but futile, to institute a comparison between the military and civil population death-rates, but there is really no true basis of comparison. As has been remarked by Dr. Willoughby in his "Handbook of Public Health and Demography," the army is not only composed of men originally selected after medical examination and within the least lethal period of life, but those who are subsequently found to be in failing health are removed and their places taken by other and presumably healthy men. The only legitimate comparison that can be made as to the health of the army, he points out, is with itself at different periods, and that only provided the losses by death and invaliding are thrown together and the sum calculated per 1000 living at each age, and under like conditions for several years consecutively, which can rarely be predicated, except of the Guards. To compare the losses from all causes of two regiments, one returned from a tour in Lower Bengal and the other in Upper Canada, would, however just as evidence of the influence of foreign service on the health of the soldier, be manifestly unfair as an indication of the sanitary condition of the barracks or home stations where they chance to be located on their return.

We may incidently mention that there were twenty-four cases of suicide among the troops in the United Kingdom, as against twenty-five in the previous year, and twenty-one the average for the previous ten years. It is, perhaps, rather significant of the effect of *ennui* induced by the monotony of military life and of intemperance and other causes, that the average age of the men was nearly thirty-three, and their average service twelve and a half years.

As regards the admission-rates in the United Kingdom there is on the whole a decrease as compared with 1891 in the various districts, the highest rates in this respect being in the Eastern district and the Dublin district, the most marked decrease, on the other hand, being in the Aldershot, where the decline was 110·6 per 1000. Comparing the different arms of the service with one another as regards admission-, death-, invaliding- and constantly sick-rates it appears that the highest admission ratio in 1892 was 965·4 in the Foot Guards, the next being 842·4 in the Cavalry; the lowest was in the Garrison Staff and Departments, and in the Royal Engineers. The highest mortality-rate, on the other hand, was in the Garrison Staff and Departments (5·75), followed by the Royal Artillery (5·50). In the Household Cavalry there was no mortality. The lowest rate was in the Infantry (3·72), followed by the Cavalry (3·93). Mortality was highest in the Foot Guards, as it was in the previous year, and lowest in the Garrison Staff and Departments, and in the Royal Engineers. The rate for constant inefficiency from sickness was also highest in the Foot Guards.

The average strength of officers in the United Kingdom was 4008, and there were 1509 cases of illness and 19 deaths; the equivalent ratios per 1000 being 376·5 for sickness and 4·74 for deaths, nearly the same as the corresponding ratios for 1891.

THE Duke and Duchess of Devonshire have promised to open the new Derbyshire Royal Infirmary on Saturday, July 7th.

THE LANCET.

LONDON: SATURDAY, MAY 19, 1894.

THE General Medical Council will commence its May sitting on Tuesday next in accordance with its own regulations. The May meeting is, indeed, in a way regarded as the principal meeting of the year. Happily there is likely to be no change in the *personnel* of the Council, neither is there any probability of any different class of subjects engaging its attention. There is a goodly *remanet* of important questions from the last meeting. One of these related to the efficiency of the "conjoint examinations in Ireland." Our readers will remember that the Council in November last passed a resolution that unless the prescribed courses of study and examination required by the Conjoint Board in Ireland of the Royal College of Surgeons and the Apothecaries' Hall of Dublin were amended so as to bring them into compliance with the requirements of the Council prior to the May meeting, the Council would feel it to be their duty to report the defects to the Privy Council. It may be confidently assumed that the two bodies named will have recognised the seriousness of the Council's warning and have given an assurance that these defects shall cease. They were certainly grave and rather incredible. The published syllabus of the Royal College, according to Dr. MCVAIL, stated with reference to these examinations that there was no no examination in mental disease, and that no certificates were required in physics, biology, vaccination, mental diseases, or ophthalmology. But in Ireland, unlike England and Scotland, there are two separate conjoint bodies. The Conjoint Board of the Royal Colleges of Physicians and of Surgeons is the principal examining body and passes a much larger number of candidates than the Conjoint Board of the Royal College of Surgeons and of the Apothecaries' Hall, or, indeed, of any other body. The table of results of professional examinations in the last volume of the minutes shows that the Conjoint Board of the two Irish Colleges passed seventy-seven candidates. It is interesting to notice that in the final examination they also rejected sixty-four—only thirteen less than they passed. Even this number of rejections, however, does not show that they were too austere, for the Council, at the instigation of the Examination Committee, guided by the reports of the visitor and inspector, thought it right to direct the serious attention of the Conjoint Board of the two Colleges to several unsatisfactory features in these final examinations, several of which had been noticed at previous visitations and had remained uncorrected. There is the less excuse for defects in this examination as it is by far the most expensive examination of the sort in the three kingdoms. The Council may hope to have information of the correction of the obvious faults pointed out in this and other bodies. Even the final examinations of the University of London did not escape criticism. At its last meeting the Council, at the instance of the Chairman of the Examination Committee, resolved that the serious defects pointed out had existed for five years, and that the answers of the Senate to the observations of the visitors and inspectors were quite inadequate. Dr. WILKS assured the Council that a further reply would be made, and this reply will be anticipated with interest by all who recognise the high reputation of the degrees of the University. In addition to delicate questions arising out of the last batch of reports of visitors, we may expect that the Reports of Visitor and Inspector to the Final Examination of the Universities of Scotland and the Corporations of England will be laid before the Council and discussed. These examinations test the working qualifications of the largest number of students entering the profession and are of the highest importance.

It would be too much to expect that even the May meeting, which is supposed to be devoted chiefly to the discussion of questions affecting medical education and the efficacy of examinations, will pass without several cases of a more or less disciplinary character engaging the attention of the Council. Two or three such stand over from last meeting, and we believe others are likely to call for settlement. Dr. RENTOUL has given due notice of his intention to raise the question of midwives in one or more of those multifarious forms in which it presents itself to his mind. He has no doubt pointed out a great anomaly in the loose way in which certificates are given to midwives after a certain amount of training and examination. Some of these purport to be veritable diplomas and are so understood by those who receive them and by a portion of the public. This subject is worthy of a little more attention than the Council has given to it, though it admits of being viewed in a different light from that in which Dr. RENTOUL sees it. It is also to be desired, unless this question is to be a regular part of the programme of every session, that the Council will treat his representations with a little more consideration than they did on the last occasion. These representations should undoubtedly be seriously met, and the least the Council can do is to take steps to secure that if legislation with regard to midwives is to take place it shall be of such a character, and accompanied by such precautions, as will secure to the poor, whenever necessary, the inestimable advantages of the attendance of a fully qualified medical practitioner.

At the last meeting of the Council Mr. BRUDENELL CARTER introduced the subject of advertising as practised by some dentists and invited the Council to give an intimation that such a practice might easily be carried far enough to be pronounced "infamous conduct" in a professional respect. In the end the matter was referred to the Executive Committee to take the opinion of the legal adviser of the Council. This opinion will no doubt be presented to the Council. The evil is a great one. If dentists are to enjoy all the benefits of a registered body under the *ægis* of the General Medical Council they must be prepared to submit to its discipline. We notice in another column the result of the appeal of the "General Council of Safe Medicine, Limited," with regard to the power to grant medical titles. The course taken by the General Medical Council has been so far successful, and the Court of Appeal has justified it. But doubtless on the report of the results of

its action an opportunity will arise to consider what is the further duty of the Council in regard to this monstrous development of the Limited Companies Act.

THE application by the authorities of the Church of St. John the Baptist, Clerkenwell, for a faculty to remove 325 bodies from the crypt of that edifice for reinterment at Woking will demonstrate to the ratepayers the costliness of superstition. That 325 bodies beneath the floor of a building should produce effluvia is not to be wondered at, especially when it is remembered that everything has been done to hinder and nothing to hasten the natural process of dissolution. We trust that this country has nearly seen the last of such senseless and mischievous practices, but on this point we are bound to speak with hesitation, so long as we continue to "honour" the greatest of our dead by placing them beneath the floor of Westminster Abbey.

It is uncertain how the practice of interring the dead within buildings originated. The Emperor CONSTANTINE the Great, who died in the fourth century, is said to have been the first who ordered his body to be disposed of after this fashion, which, being set by an Emperor, soon became popular. In the Middle Ages ecclesiastical dignitaries were commonly buried within the buildings with which they were associated, and if by chance they attained the sanctity of canonisation there was an eager competition among the laity to be buried near them. Thus it came to be considered that burial within a church was essential for maintaining the respectability of the family of the deceased. The only benefit which has accrued from this practice is the almost priceless treasure (from an archæological point of view) of the many intra-mural monuments which are scattered through the length and breadth of the land, and which have served in an extraordinary degree to make us acquainted with our ancestors. We have often wondered whether SHAKESPEARE, with a knowledge that he would be interred beneath the chancel of Stratford Church, recognised the absurdity of such a mode of interment and, foreseeing with prophetic insight that a "faculty" might be applied for, inspired the remarkable lines which are engraved upon his tombstone:

> "Good frend, for Jesus sake, forbeare
> To digg the dust encloased heare.
> Blest be ye man yt spares thes stones,
> And curst be he yt moves my bones."

This sentiment, which animated the greatest intellect the world has ever seen, seems common if it be not almost instinctive in human nature; and doubtless many of those whose remains will be conveyed from Clerkenwell to Woking shared with SHAKESPEARE the desire to curse those who should move their bones. Those who still in the present day harbour such puerile superstitions should be careful to be buried in the earth, whereby alone, it would appear, is complete dissipation brought about, and all danger of subsequent removal obviated, because of its impossibility. Theoretically the disturbance of old burial places is not without danger, but we are not aware that any serious evils have arisen when bodies have been removed from one spot to another. "Good lack," as PEPYS would have said, "to think of the trouble and expense which these dead bodies have been to the living." The lead and oak coffins to begin with, and the subsequent removal at the expense of the ratepayers, when multiplied by 325, must represent a good round sum. Had they been rationally buried in the earth, and the earth planted, there would have been by this time a pure soil beneath, a pure air above freshened by green leaves, and a very substantial unearned increment in the shape of timber.

In conclusion let us hasten to add that we have no wish to discourage in any way the honour which is due to the memory of the great. This, be it observed, is a very different thing from making attempts to preserve what is essentially perishable and what in the scheme of nature was undoubtedly intended to be absorbed into the bosom the "mother of all things." By all means let our cathedrals, churches, and other places of worship be made beautiful by loving records. The monuments in Westminster Abbey may not harmonise with the architecture of the building and they may not attain to the highest flights of æstheticism, but they represent in a grand and permanent fashion the waves of national sentiment which have at intervals thrilled the British nation. Looking at these records, our minds are filled with the memory of noble lives. The mind tries not to think of what the flagstones hide.

LAST Saturday morning the largest college in our oldest university was the scene of a disgraceful *émeute*. For various causes a section of the undergraduate members of Christ Church considered themselves aggrieved with the authorities set over them, and as a practical demonstration of the extent to which their feelings had been lacerated they proceeded to break with sticks and missiles nearly five hundred panes of glass in Peckwater Quad. This is the second time within the last six months that the junior members of "The House" have distinguished themselves by disfiguring the buildings of their college, a reiteration of mischievousness which would suggest that the offenders of last Christmas were so leniently dealt with that their fate has proved no deterrent. If this be so, it is an error of mercy that should not occur again.

We have noted with disappointment the absence from the columns of our daily contemporaries of any hearty expressions of disapproval of these acts of vandalism; for in these matters it behoves a medical journal to hold a brief for orderly behaviour. The reason for this is apparent. The medical student has unfortunately been held up to scorn as the proverbial rowdy. The *Daily Chronicle* of Tuesday, May 15th, contained the following amazing summary of the modern medical student's alleged career:—

"The new school consists of the afore-mentioned enthusiasts who have only just passed from the stage at which young men go forth from the hospitals on football or boat-race nights to parade the West-end in gangs, knock foot-passengers off the pavement, and then in the interests of what they call sport destroy the glasses of some more or less innocent proprietor of a West-end drinking-bar; and, having returned to their Bayswater or Bloomsbury lodging in the early morning and tried to sleep off the effects of bad whisky and worse cigars, go forth to gloat over men older than themselves, destroying human lives in the interests of science."

This picture of the present medical student is grossly incorrect. It is a libel founded on the laboured caricatures of ALBERT SMITH and HENRY COCKTON; and, alas, generally acquiesced in by the public, still under the sway of the masterly humour of DICKENS. But, indeed, BOB SAWYER is

as obsolete as the "cramp-rings" of Sir KENELM DIGBY or his "apoplectic snuff." The rowdy of West-end drinking bars, the terror of peaceable foot-passengers, is rare in our hospital schools, and would be there looked upon with about as much favour as Mr. JACK HOPKINS of St. Bartholomew's might expect to receive at the hands of the students of the famous institution to which he was supposed to belong if he presented himself before them in his historic costume of "a black velvet waistcoat, with thunder-and-lightning buttons, and a blue-striped shirt with a white false collar."

But is not the time nearly ripe when all this should be generally recognised? The stage has bitterly resented the euphemistic description of every Cyprian as an "actress," and the result has been that the police reports are now more accurately, if more broadly, worded. We would ask for our medical students the same assistance from the lay press. Every rowdy who is arrested in the streets and who vaguely describes himself as a student is not a medical student. We will go further—he is almost invariably employed in some pursuit other than medicine. Our much-examined students have not the leisure, even if the nature of their studies, now high in level and wide in range, was not calculated to remove the inclination, to live up or down to their "proverbial" character. Surely, then, as they have ceased to deserve the appellation of rowdy, it is time that it should no longer be applied to them. When we regard the leniency with which the latest Oxonian exploit has been viewed in the columns of our contemporaries, we cannot refrain from mentally picturing the sort of literary castigation that the offenders would have received had they been medical students. Yet we venture to say that not within the memory of any of our readers has a similar display of wanton conduct been given by the aspirants to the temperate and laborious profession of healing. There is a wise saw which tells tersely the inevitable and pendant fate of the dog of ill-repute. Its truth has been now somewhat over-demonstrated in the case of the medical student, and it is time that another aphorism came into play. Even the worm, we understand, will turn. In the name of our medical students, may we be permitted to resent for them the eternal representation of them as bar-loafers and vulgar leaders in pavement riots?

Annotations.

"Ne quid nimis."

THE HOSPITAL SUNDAY FUND.

WE have received from the secretary of the Metropolitan Hospital Sunday Fund some memoranda concerning its origin in London and its subsequent work. The document sets forth that twenty-one years ago, in 1873, Hospital Sunday was established in London; that the late Dr. James Wakley, Editor of THE LANCET, was the first person to press for Hospital Sunday in London by numerous paragraphs and articles; that the present proprietors publish their Hospital Sunday Supplement and forward it gratuitously by post to the representatives of all the congregations of London; that Lord Mayor Waterlow gave practical effect to the suggestions of the late Canon Miller, D.D., and others, and became the first president and treasurer of the Fund in London; that Sir Edmund Hay Currie and Mr. Richard B. Martin, M.P., have worked as honorary secretaries from the commencement, and still hold office. In the past twenty-one years £725,647 has been collected on behalf of this Fund and disbursed by the Council at an expenditure of little over 3 per cent. The document describes the vastness of the work of dealing with five millions of people living close to each other, of whom the great majority are poor, and many of whom are sick and suffering. "In round numbers," it adds, "£100,000 is wanted this year to cover the liabilities of our hospitals and dispensaries." The sum indicated is by no means a fanciful one in a city like London, with 1,200,000 persons dependent for their health and life upon its medical institutions. All who are in any way connected with suffering humanity must desire to see the contributions to the Hospital Sunday Fund augmented far beyond their present inefficiency. In no year during the past twenty-one have the collections from congregations ever reached the sum of £40,000. The effort to accomplish the desired end must therefore be a great one, demanding much concentration of effort. Indeed, the wave of charity on behalf of hospitals, so far as congregational subscriptions have been concerned, has been receding during the last three years. From every part of the country, the record, especially last year, has been on a descending scale, and the Metropolitan Hospital Sunday Fund suffered to the extent of nearly £2,000 over the previous year. This is the more regrettable from the circumstance that the amount of sickness and disease in the London districts has not shown any signs of diminution. Applications for relief had, on the other hand, markedly increased. Another cause for dismay will be observed on estimating the number of hospital beds vacant in the metropolis through sheer inability of the management to provide the requisite funds. In this great city 8216 beds are provided in the hospitals in the various districts, but nearly 2000 of these are tenantless by reason of the dearth of subscriptions. This condition shows no signs of diminution, as recent returns indicate that still more beds are becoming untenanted. The year 1893 was undoubtedly one of disaster to the commercial and financial classes; but even in the best years and under the best circumstances the collection falls miserably short of what it ought to realise in this great emporium of wealth. Medical men of all people are the best qualified to fully realise the advantages of their association with the Hospital Sunday movement, and we trust that on June 10th it will be abundantly manifest that the co-operation on behalf of this Fund of all classes of the community has been re-invigorated and has resulted in realising the most sanguine expectations of the supporters of the Metropolitan Hospital Sunday Fund.

THE CART HORSE EXHIBITION.

THE Cart Horse Exhibition held last Monday in Regent's-park presented many features of interest to those representatives of medicine who say, with the great classic, they are men and whatever pertains to men is of moment to them. This was the tenth exhibition of the kind, but it exceeded all the preceding ones both in success and importance. The grand object is to improve the quality of that most useful servant of man, the cart-horse; but another design is to improve the quality of the men who have the animals in charge, to make them more humane and more careful of the health of the animals. The awards to the men in the way of diplomas and metal badges are the temptation for the improvements they produce, and the result shows that the method is sound as well as merciful. After the award of prizes the procession round the inner circle of the park for the distribution of the much-valued diplomas and badges by the Baroness Burdett-Coutts was certainly a wonderful sight. Such masses of vital power and giant beauty

as those horses, all harnessed and gay, were indeed worthy of Whitsuntide. Such cleanliness of dray and waggon, such healthiness of drivers and families, it really did the observer good to witness. There is a story that a very particular old lady, thinking that she had been insulted by the driver of a car which brought coals to her door, wrote to the coal proprietor to complain, and received, in reply, the consolation that while he much regretted the occurrence he was equally sorry to have to explain that the same might happen again, because, do what he would, he could not succeed in getting a gentleman to undertake the office of coal-heaver. But now, even here, a change seems imminent, for of all the cars in the show none surpassed the coal cars in smartness of animal, quality of car, and character of driver. Through the show the grand fact which to us stood out most clearly and satisfactorily was Health. Amongst the books of the past bearing on sanitation one of the first and most memorable, now half a century old, was the treatise of two distinguished representatives of medicine, Drs. Marx and Willis, both long dead but not forgotten. Their work was on "The Decrease of Disease by Civilisation." The object of these pioneers was to prove that in proportion as civilisation advanced so health in man and in the lower animals advanced with equal stride, and that with civilisation the beauty of the world would improve in garden and home, in field and stable. They ventured no prophecy, but like true medical philosophers they merely related faithful observations on natural history, and sent forth inferences of what might be, which in result have turned out to be the very best prophecy that ever was known. There was in their work truth in idea—in the ideals they presented from the study of the past, with light extending, through their eyes, into the future, even unto such a sight as that of this week in Regent's-park. As Mr. Colam, the energetic secretary of the Royal Society for the Prevention of Cruelty to Animals, expressed, and Lord Wantage, the Lord Mayor, and others emphasised, there was, moreover, a humane element in the event, a distinct improvement in the feeling, a betterment of the better nature, of those who undertake the charge of useful animals, so that the barbarities and cruelties of former days are being replaced by a system of care and kindness which, in examples like that under review, has all but reached the limits of the possible and practicable. Great credit was given to Sir Walter Gilbey for the generous part he has played in the advancement that had been shown, and in the name of a generous profession we venture to re-echo the gratitude so cordially expressed.

A STRIKE OF WET-NURSES.

IT is reported that Austria is threatened with famine, and that of a kind which is probably unprecedented in history. Like some others in recent times, it is not traceable to any adverse disposition of nature, but to economic discontent. Fortunately it cannot affect the entire population. The wet-nurses of the dual monarchy have rebelled against the conditions of their occupation, and the infant reinforcements of the nation are in danger of losing an important source of food-supply. The demands of the nurses are neither few nor small. They include an eight hours day, a vacation or close time, Sundays off duty, 30*s.* a week, and, above all, the abolition of a syndicate, which is their middleman. This latter arrangement surely ought to be, if it is not, a superfluous convenience. Its existence, however, only proves to what dimensions the system of wet-nursing has grown in the country. This fact is in itself suggestive. So many mothers, yet so little milk that a stranger must be entrusted, and that as an everyday occurrence, with the performance of the most elementary duties of maternity—we have here no happy augury for the future of a race. The above proposals, moreover, very strongly tempt us to inquire what constitutes the essential character of a wet-nurse if her duties can be so readily performed, as they must be during her seasons of recreation, by the simple expedient of employing a feeding-bottle. It is perhaps surprising that their profits and their utility have not already been more seriously encroached upon than they have by their artificial rival. The proposed strike will not, we imagine, procure for nursing women that leisure or personal comfort which they, like many others who live to maintain the world's health and energies, vainly desire; it will, however, have done much if its effect should be the diminution of their own excessive numbers, and a more righteous recognition of the duties of Austrian motherhood.

THE QUEEN AND THE MANCHESTER SHIP CANAL.

SEVERAL statements have been current as to the change of plans with regard to Her Majesty's visit to the Manchester Ship Canal. The facts are as follows. Rumours as to the highly polluted condition of the canal water evidently reached the Queen's personal advisers, and the result was that Her Majesty requested a report from skilled officers of the Local Government Board. Dr. Theodore Thomson of the Medical Department and Major-General Carey of the Engineer Department consequently took an authorised trip down the canal in a steam-launch and examined the sources of pollution, including outfalls from sewage works, &c., by which the canal is contaminated; and it is clearly on their report that a change of plan has been adopted. For one reason this is to be regretted, for the Queen will now be unable to inspect some of the principal engineering works which characterise this great scheme. But, on the other hand, no one would desire that Her Majesty should run even the slightest risk of exposure to the effluvia which often result from churning up canal waters, especially after drought and during moist, mild weather.

GIFT OF THE TITLE OF M.D. BY A LIMITED COMPANY: STEEL v. ORMSBY.

OUR readers will remember this case in its earlier stage, in which the magistrates of Houghton-le-Spring, under Section 40 of the Medical Act, fined Mr. Steel for assuming and using the title of M.D., which had been given to him by a joint stock company duly incorporated and registered under the Companies Act of 1882, called the General Council of Safe Medicine. We have already described[1] this company and its objects at more length than it deserves, but for its amazing pretensions and those of its votaries. Mr. Steel, a working coal-miner, the appellant to the Court of Queen's Bench (before Mr. Justice Wright and Mr. Justice Collins), had actually gone the length of signing death certificates and other certificates on the strength of the certificate and titles granted by the said company, including, as the company did, the Magnetic and Botanic School of Safe Medicine, incorporated in 1893, and having Dr. Younger, M.D. (U.S.), for its president. The magistrates, while convicting Mr. Steel of a violation of the fortieth clause of the Medical Act, stated a case, on which he appealed. The defence was argued by Mr. Crump, Q.C., who contended that Mr. Steel was entitled to use any title he pleased, provided he did not claim to be registered. Mr. Justice Wright pointed out that the magistrates had expressly found that the defendant had falsely represented that he was an M.D., implying registration under the Act. Mr. Muir Mackenzie argued that it was a question of fact, not of law. The Court upheld the conviction. Mr. Justice Wright was unable to see any doubt or difficulty whatever. "The evidence was," said Mr. Justice Wright [*vide The Times* report], "that the defendant, a collier, had got a certificate from a bogus institution which

[1] THE LANCET, Sept. 23rd, 1893.

pretended to give diplomas, thereby defrauding the public, and thus had set up in business as a doctor." Had he called himself Botanical Physician, or Doctor of a Botanical College, it would have been different. But there were only the letters "M.D. Bc." Mr. Justice Collins concurred. The appeal was dismissed with costs. It would be affectation to express much delight over the pricking of such a bubble; but the judgment of the Court will go to strengthen much more the case against those who trade in the letters M D, from whatever source it comes. And it will surely not be lost on the General Medical Council, who should make it their business to protest seriously against such an abuse of the Limited Companies Act as the registration of such a company at Somerset House.

PROFESSOR TRICOMI OF PADUA.

IN the Surgical Section at the recent International Medical Congress in Rome Dr. Ernesto Tricomi, Professor of Surgery in the University of Padua, exhibited a case of resection of the liver, in which a diseased portion of that viscus had been successfully removed by a novel method. Having opened the abdominal wall, Dr. Tricomi drew the diseased portion through the aperture till the whole of it requiring removal was external to the surface. A ligature was then passed round it just above the seat of disease and maintained *in situ* until the diseased portion dropped off. The liver was then pushed back to its normal place and the aperture closed, and the patient was exhibited at the recent Congress. For this innovation in hepatic surgery Dr. Tricomi received the warm congratulations of the Section. To signalise the honour he had thus conferred on Padua, the students of medicine at that school have just presented him with his portrait, accompanied by an address engrossed on parchment and signed by all his pupils, past and present. The incident is noteworthy as illustrating the "surgical revival" of which the Italian schools are giving such satisfactory evidence, and also as drawing attention to the University of Padua in particular. Fifteen years ago its students had declined to less than 900. This year they have risen in number to 1500—a rise incontestably due to the presence on its staff of such teachers and operators as Ernesto Tricomi.

SYRINGOMYELIA.

IN the *Journal of Nervous and Mental Diseases* Dr. C. K. Mills briefly describes two cases of this now well-recognised disease. The first patient was a man fifty-two years of age, who had lived a healthy, temperate life. He suffered from a very painful whitlow twenty years before he came under observation, but, with that one exception, had had no illness. He had no history of any diplopia or of vesical or rectal trouble. His peculiar condition as regards sensibility was first brought under his notice nine years previously by the following accident. While at his work he leaned against a hot steam-pipe and severely burned the right side of his back. But not only was he unconscious of this at the time it happened, but he actually knew nothing of it until a fortnight later, when the state of his bedclothing directed his attention to the fact that extensive ulceration was present on the right shoulder. He had a similar accident in 1892. With the exception of the remains of this ulceration he showed no manifest signs of disease when he came under observation. On the right side of the body, however, commencing just under the jaw of that side, was noticed a peculiarity about the thermal sense. This did not consist in a complete loss of thermal sensibility except in certain spots, but there was a difference in regard to heat on this side as compared with the other, consisting in a diminished sensibility, or a retarded perception, and in some parts of a confusion between heat and cold. Sensibility to pain was also changed over these areas. There was no atrophy or loss of power on the affected side, and sensibility to ordinary touch was unimpaired. The reflexes were all normal. The second case was that of a man aged sixty-two, whose first experience of illness occurred in 1886. He then noticed a difficulty in using the right leg and a slight pain in the lumbar region. Three years later the right knee swelled and the muscles wasted above the joint. In 1891 he began to experience difficulty in passing urine. When he came under observation he had much change about the knee-joint and the whole leg was curved, with the convexity backward. There was considerable muscular wasting and actual paralysis of most muscles both in the leg and thigh of this side. The power of the upper extremities and of the left leg did not seem to be notably impaired. Fibrillary tremors, however, were found in both arm and leg on the right side. The muscles on the right leg, in spite of their wasted condition, responded to faradaism, although less actively than those on the left side. The reflexes on the right leg were increased and foot-clonus was present. There was thermo-anæsthesia from the fourth rib down the trunk and left leg irregularly across the right shoulder and down the arm on that side. In certain other localities the loss of temperature sense was less marked; the condition of the back was similar, and there was almost coextensive impairment of perception of blunt and sharp points. There was some impairment also of tactile sensibility. This second patient apparently had a trophic change in the knee-joint similar to what occurs in locomotor ataxy under the name of "Charcot's joint." An instance of a similar condition, also in association with syringomyelia, was published in THE LANCET some time ago by Dr. Hughlings Jackson and Dr. Galloway,[1] but in that case the affection was of the left elbow. An even more remarkable example, which is reported in our present issue, was related to the Clinical Society at its last meeting by Mr. J. R. Lunn and Dr. Beevor, the patient having been under observation for many years. Besides sensory defects and muscular atrophy, this patient presented most marked and extensive joint changes, which strikingly illustrate the dependence of the nutrition of the joints upon nerve influence, which was one of Charcot's fertile discoveries. The syringomyelia in Mr. Lunn's case was very typical, and it adds to the interest of his record that ten years ago the patient had been examined by a committee of the society, who reported that his curious articular deformities might depend on central nerve disease.

AN IMPORTANT POINT IN PROSECUTIONS UNDER THE FOOD AND DRUGS ACT.

A VERY important point arose a few days ago in the prosecution of a firm of butter merchants in Manchester. The case was heard before Mr. Headlam, the stipendiary magistrate. The prosecution was for selling to an inspector duly appointed under the Act an article which was not of the nature, substance, and quality of the article demanded—viz, butter. Mr. Estcourt, the city analyst, certified that it contained 18 per cent. of foreign fat—in other words, that it was margarine. On the tub from which the sample was bought were the words "Selected new-milk dairies; foreign produce; guaranteed pure butter." The analyst's certificate was accepted by the defence as substantially correct. The butter in question belonged to what was known as "Hamburg factory butter." It was known in the trade as "secondary butter," but it should in all cases be pure butter and not mixed with foreign fat. The defence set up was warranty. On the invoice it was guaranteed to the defendants as absolutely pure butter, and it was argued that this constituted a warranty within the meaning of the Act of Parliament and that they were exempt

[1] THE LANCET, Feb. 20th, 1892.

from prosecution under that warranty. For the prosecution, however, it was contended that the warranty was insufficient, as it was only in general terms and did not refer to each cask of butter specifically, which, it was submitted, was necessary under the Act, and, further, the warranty was bad, because a warranty could only be given by an English subject—one subject to the laws of the realm—and not a foreigner, over whom English courts had no jurisdiction. If this were not so, then the penal clauses of the Act were useless. Mr. Headlam took a week to consider the point and decided against the defence on this point. He did not think that a foreign merchant, who was not amenable to English jurisdiction, could give a warranty which would hold good in an English court. He should, therefore, fine the defendants £5 and costs. It is at once apparent how important such a decision as this is; if it were otherwise, then margarine could easily be sold for butter if it were so invoiced and guaranteed by the foreign producer. The Manchester authorities are to be congratulated on their activity in reference to the Food and Drugs Act. A few weeks ago we had occasion to refer to an action by them against dealers selling Irish butter with too great a proportion of water. These actions are not only of primary importance to the public, but also to those who have an interest in agriculture.

THE HEALTH OF SOUTHEND.

WE have received a request from Southend to note the fact that during the first quarter of this year the general death-rate of the borough for the quarter was only 11·3 per 1000 living, that the town was almost entirely free from enteric fever, and that during the first three weeks of the present quarter only two cases of that disease were notified, one of them being an imported case. In the case of districts having but small populations it is not our custom to give publicity to vital statistics covering so short a period as three months, because, taken alone, they are apt to be deceptive. And, even as regards the comparative absence of attacks of enteric fever in Southend, we are unable to ignore the fact that the period in question is one in which there is commonly a marked diminution in the incidence of this disease in all parts of England. But, as we have more than once pointed out certain drainage and other defects to which we believed an unnecessary amount of disease in Southend to be due, we do not on this occasion abstain from referring to the quarterly report in question. But it must be taken for what it is worth, and its worth will largely depend on evidence that the obvious causes of disease hitherto existing have been removed.

THE WALTHAM ABBEY EXPLOSIONS.

LAST week we drew attention to the increasing perils to which those engaged in the manufacture of "high explosives" were exposed, and, in view of the series of disasters which have occurred at Waltham Abbey during the last four months, we urged the necessity of a careful inquiry into the subject, although we were willing to believe that every part of the processes of preparation at Waltham was under the strictest surveillance and that every precaution it was possible to take against the risk of explosion had been taken. To a certain extent we regret to say that our impression in this regard was not quite correct, since, according to a report recently issued by the committee appointed to inquire into the explosion at Waltham on Dec. 13th, 1893, there existed very grave defects in the system of discipline and precautions prevailing at Waltham Abbey. More prominent amongst these are (1) the excessively large number of persons allowed to be present within a single danger area; (2) a defective system of searching to ensure the exclusion of matches; (3) inadequacy of the existing system of supervising danger sheds; (4) grave defects in the system of repairs of machinery and the use of tools; (5) disposal of oily rags and clothes; (6) arrangements for exclusion of grit; (7) taking meals in "shoe-hole"; (8) unsatisfactory character of existing rules; (9) absence of proper system of penalties; (10) limits of quantity of explosive to be more carefully defined; (11) lining of danger building; and finally (12) the committee are not satisfied that the arrangements under which houses are handed over to the works department for repair or alteration, and are again restored to their use as danger buildings, are satisfactory; no specific regulations bearing on this point have at any rate been brought to their notice. We repeat that we learn with sad surprise that such a formidable array of defects were shown to exist according to this report, and that the Government officials should have permitted the rules and regulations to fall so far into abeyance. It is, we fear, another regrettable illustration of the proverb that familiarity often breeds contempt, but contempt for pent-up forces must, and does, often bring with it dire and most fearful revenge. We sincerely trust that the able and fearless report of the committee will be acted upon without the least possible delay, so that the relatives and friends of the operatives employed in these factories may be to some extent reassured and their minds relieved.

A NECESSARY DISCLAIMER.

WE heartily sympathise with Dr. Edward G. Younger, who writes to us to point out that he has no connexion with the gentleman to whom we referred in an annotation last week on the conference of herbalists. "I am," writes Dr. Younger, "the only living member of the medical profession of that name, and I have great reason to believe that I have already suffered from this quack (who, I may add, is no relation of mine and whom I have never seen), bearing with me a name somewhat uncommon south of the border, and living in the same postal district as myself. For some three years past I have been pestered with letters addressed to 'Dr.' Younger of Ledbury-road, Bayswater, and re-directed to me by the postal authorities (most of them enclosing postal orders), and asking for consignments of certain 'Alofas remedies.' These letters and orders I have sent back through the Dead Letter Office. I gather that this man must have left Ledbury-road without leaving any address, and that letters addressed 'Dr.' Younger have been re-directed to me as being the only medical man of that name in the Post Office London Directory. I have recently heard that people who have been advised to consult me have declined to do so under the impression that I am a quack mesmerist." We are glad to give Dr. Younger's disclaimer every publicity in our power, and, as we have already said, sincerely sympathise with him in the matter.

FEMALE SANITARY INSPECTORS.

THE experiment of employing women for the inspection of workshops where women are employed, which the Kensington Vestry has recently made, seems to have been attended with great success, and it has been decided to further continue their services. Unfortunately for Kensington, one of the two inspectors who were tentatively appointed has just obtained a Government Inspectorship of Factories and Workshops, so that a vacancy in the female staff of the vestry is thereby occasioned. Since the two inspectors referred to were appointed they have succeeded in obtaining the certificate of the Sanitary Institute, but it has not yet been deemed desirable by the vestry to take steps to invest them with the powers which attach to the office of sanitary inspectors, although, as Dr. Orme Dudfield points out, without such powers they cannot give certificates

under Section 25 of the Public Health (London) Act, 1891, and therefore their usefulness is to some extent curtailed. In a report made to Dr. Dudfield by one of the female inspectors, attention is drawn to the manner in which, with the commencement of the London season, the dressmakers' workrooms tend to become overcrowded, and it is stated that there is great difficulty in permanently preventing it. Dr. Dudfield, in his last monthly report, draws attention to the fact that in the "minority report" of the Labour Commission the opinion is expressed "that the number of women factory inspectors should be increased, and that local authorities might advantageously be urged by the Local Government Board to follow the example of the Kensington Vestry in appointing women sanitary inspectors with the special object of enforcing the sanitary laws in women's workshops," and in commenting upon this Dr. Dudfield remarks that such an object cannot be efficiently carried out unless the women inspectors are vested with the powers of sanitary inspectors.

THE GENERAL PRACTITIONERS' ASSOCIATION.

THE annual meeting of this association was held on May 10th, under the presidency of Dr. F. H. Alderson. The reports were considered satisfactory. The association numbers about 300 members, and has for its main objects the suppression of quackery, the defence of medical men unjustly assailed, the friendly adjustment of disputes between members of the profession and an increase in the direct representation of the profession in the General Medical Council. Dr. Eady is the President-elect for the ensuing year. In the evening the annual dinner of the Association took place, Dr. Alderson being in the chair. Among the speakers were Sir James Crichton Browne, Rev. Mr. MacKay, Dr. Bedford Fenwick, Dr. Glover, Dr. Eady, Dr. Oswald, and others.

THE DEATH-RATE IN ITALY.

OUR thanks are due to the "Ministero d'Agricultura Industria e Commercio" for the following highly instructive and significant statistics drawn from the official returns for the period 1891-92. The total number of deaths in the kingdom was 802,714, or 26·29 for every 1000 inhabitants, the death-rate being lowest in the densely peopled Lombard region (7 per 1000) and highest in the Umbrian, which, in spite of its sparsely populated communes, shows also a mortality of 7 per 1000. The chief cause of death was tuberculosis, the proportion being 14·20 for every 10,000 inhabitants; while carbuncle contributed least to the mortality—0·02 per 10,000. Still calculating on 10,000 of the population, the deaths from syphilis among children (legitimate and illegitimate) were subdivided thus: from one to five years, 380 legitimate males and 319 legitimate females; and again, among the illegitimates, 512 males and 601 females. In 1892 enteritis yielded the heaviest mortality—viz., 103,447—and lepra the smallest, 4. Also, in the same year, the city in which, as the return puts it, "si morì più facilmente" (death occurred most easily), taken from communes of over 60,000 inhabitants, and always in the proportion of 10 per cent., was Naples; while at the opposite end of the scale was Pisa. The deaths from malarial fever in the commune of Rome in 1892, of a total of 189, were subdivided thus: 97 "a domicilio" (in their own dwellings), 18 in public institutions among the permanent population, and 74 among the adventitious or migratory. Calculated on the basis of age and per 1000 of the inhabitants, the total of deaths included 239·8 from gastritis in the first five years and 378·2 from "tabes senilis" from the age of eighty and upwards. The accidental deaths throughout the kingdom were in 1892 as many as 10,146—that is to say, 33·23 for every 10,000 inhabitants. The suicides were most frequent in Lombard (268), and fewest in the Basilicata (ex-kingdom of Naples), where they were 15. In all Italy they amounted to 1723—the majority of self-murders being males (1392), the season most prolific in such cases being summer. The occupations which contributed in heaviest proportion to the mortality were the agricultural, with 359; the mining being least, with 2. Finally, deaths by duelling in 1892 account for 14 of the general mortality—the most combative month ("il mese più battagliero") being August, in which 24 encounters occurred. Among the provocatives of these, verbal insult ("diverbi") led to 39 hostile meetings. Of all the provinces in the kingdom that of Milan was the most pugnacious, with its total of 15 duels, that of Ascoli the least, which in three years had not any such encounter to put on record.

GUNSHOT WOUND OF THE BRAIN.

DR. TEFFT gives in the *New York Medical Record* an account of an interesting and unusual case. A boy aged twelve received on July 4th last a pistol ball in the left frontal region. It entered the frontal bone seven-eighths of an inch above the margin of the orbit and an inch to the left of the middle line. Trephining was performed almost at once, the patient being unconscious. When the brain was exposed it was found that the bullet had entered it and travelled directly backward, so that a Nélaton probe introduced passed back and struck in the left occipital region. Trephining was next performed in this locality, and after a little trouble the bullet was found and removed. It was lying about an inch and a half below where it struck the bone, and embedded in the brain to a depth of half or three-quarters of an inch. The wounds were cleansed as carefully as possible and drainage made at each extremity of the bullet track. During the first three days the patient was feverish, but the temperature subsided on the fourth day. The boy regained consciousness and took an interest in his surroundings. His condition revealed some disturbance of articulation, considerable weakness of the right arm and less of the corresponding leg. On the eighth day there was a change for the worse, he gradually passed into a condition of somnolence, and finally died comatose on the twelfth day after the injury. At the post-mortem examination slight hernia cerebri was found at each end of the bullet track, but no collection of pus was discovered. The case is not of a common kind, and it is unfortunate that a better result did not follow an operation so skilfully and successfully carried out.

"THE MEDICAL PASTOR."

THERE appeared in THE LANCET of Aug. 19th last under the above heading a short account of the life and character of the Rev. Francis Edward Belcombe, M.A., M.R.C.S. Eng. After qualifying in medicine, or rather in surgery, and finding himself somewhat deficient in the *mens medica*, he took Orders and did admirable clerical work in Edinburgh, in which his medical knowledge served him well. Our opinion has lately been sought as to the feasibility of young men studying and qualifying in both professions and afterwards practising in both. Our querist anticipates our reply—that such a double function would not work well, for many reasons. First, the differentiation of work is a mark of the present age. It is difficult enough to do medical duty well when it is the sole occupation of him who practises it. "Medicine," said Sir Andrew Clark, who had a religious conception of the office of the physician entitling him to preach and to lay down the commandments of physiological righteousness to his patient, "is a jealous mistress," and he would be a rare man who could do his duty to both callings. It requires greater judgment and tact than are given to most men to mix up these two professions. The

mixture of them dates back to a very early period, when priests were the chief depositories of medical learning, and until a few years back there have been traces of this combination. Half a century since it was, we believe, not very uncommon in Scotland for men to have both sets of qualifications, though we are not aware that they often practised in both professions. Another strong objection would lie in the crowded towns in the sense of unfair competition, which men in medical practice would feel when their opponent had other modes of introduction and of influence in families from which they were shut out. The result would be to introduce an element of discord into the ranks of the medical profession and to lower the dignity of the spiritual office.

THE LONDON WATER-SUPPLY.

TWO points are worthy of note in Professor Frankland's letter in the recently-issued report on the condition of the metropolitan water-supply for March, 1894. One is that, in spite of the facts that the Thames at Hampton was turbid and yellow in colour and that chemically and bacteriologically it was considerably inferior in quality to its condition previously, yet the water as delivered by the five companies drawing from this river was considerably better in chemical quality than on the previous occasion. The other is that bacterioscopic examination of the water elicited the result that the number of organisms in the East London Water Company's water was on one occasion abnormally high. In explanation of this the engineer wrote to Dr. Frankland to the effect that three of the filter-beds connected with No. 1 Essex well and three of those connected with No. 2 Essex well were cleaned only a few days previously to the collection of the samples. Professor Crookes and Dr. Odling report that the Thames-derived waters are rapidly approaching their high summer standard, and that the good quality of the supply which they remarked in their report for February had been slightly exceeded in March. Still later (May 8th) the same chemists write, in a leaflet issued in advance of the usual monthly parliamentary report, that the Thames-derived waters are now of a high degree of purity, and may be considered to have assumed their summer characteristics—an improved condition which is ascribed to the increased activity of vegetation, higher temperature, and more abundant light—all of which are important factors in promoting oxidation and a consequent reduction in the amount of dissolved organic matter.

DEATH OF PROFESSOR HENRY MORLEY.

IN Professor Henry Morley, King's College has lost one of its most distinguished *alumni*, and English literature one of its most thorough-going and accomplished exponents. Henry Morley was born in London seventy-two years ago, and received his education partly at the Moravian School at Neuwied-on-the-Rhine and partly at King's College, with which institution his name will always be connected. He was originally brought up to pursue medicine as a career—the choice of profession, it should be added, having been his father's, not his own—and for a short time actually practised in the country. But his literary proclivities made themselves early felt, and after a short period as a schoolmaster in Liverpool he returned to London and adopted journalism as his definite profession. The papers with which he was first connected were *Household Words* and the *Examiner*, and of the latter he was for some time editor. It is as a popular author and lecturer on, and critic of, our language that Professor Henry Morley will be remembered. He was elected English lecturer at King's College in 1857, and eight years later was appointed Professor of English at University College, a post he filled for a quarter of a century. During this period his industry was unremitting. The number of original works from his pen is large, while his prefaces and introductions are countless. Sixty-three volumes of Morley's Universal Library have been published under his supervision, and he also edited Cassell's National Library and the Carisbrooke Library. A man of wide literary taste and exact literary knowledge, Professor Henry Morley has, in a straightforward and unambitious manner, done more to spread a general knowledge of our tongue than any man of the Victorian era.

GUY'S HOSPITAL.

WE are glad to learn from a communication which has reached us from Guy's Hospital that the Salters' Company have permanently endowed five beds in that institution, at a cost of £250 per annum. This bequest is very opportune, as the income of the hospital has of late fallen considerably, and much difficulty is experienced by the authorities in carrying on their work on their present financial basis. The hospital requires an income of over £40,000 per annum, while the receipts from the hospital estates, which amounted in 1880 to £41,000, owing to agricultural depression and the universal depreciation of land, have now fallen to £21,000.

TYPHOID FEVER AT BRIXTON.

IT appears from reports that have reached us that an extensive outbreak of enteric fever is at the present time manifesting itself in Brixton, and some sixty cases with ten deaths have occurred. Considerable suspicion seems to be attached to milk as the vehicle of infection, and it is said that the cows supplying the milk have been fed in part on grass obtained from a sewage farm, and also that the milk utensils have been washed with water derived from a brook into which the effluent from the sewage farm flows. Whether these reports are correct we are unable to state, but if so we may look forward to an instructive account of the outbreak from Dr. Verdon, medical officer of health for Lambeth. We feel sure, too, that in seeking for the cause of this outbreak the investigations will not stop short at any possible infection from a human source, but that a thorough examination into the health of the cows supplying the milk will be made. In this country, it is true, no outbreaks of typhoid fever have been definitely proved to be due to illness in cows; but Dr. Allen of Pietermaritzburg and others are of opinion that some outbreaks of this disease are to be thus accounted for. The question of the specific pollution of our milk supplies is deriving an additional importance from a public health point of view by the growing tendency which there is to treat the milk from several dairies at central creameries, and, as an instance of this, we may refer to the extremely interesting paper on "Creameries and Infectious Diseases," by Dr. Welply, which we published recently in full in our columns.[1]

NOTIFICATION: "A MISCARRIAGE OF JUSTICE."

UNDER the above heading certain newspapers refer to proceedings recently brought against Dr. John Galton of Upper Norwood for having failed to notify a case of typhoid fever; the proceedings terminating in the imposition of a fine with costs, because Dr. Galton was unable to support his testimony to the effect that he felt convinced he had notified the case, by the production of the counterfoil of the notification certificate. Later it was found that the certificate had been sent to the London address of the medical officer of health, but had not reached him. The bench who had inflicted the fine had originally stated that there had been gross carelessness, but now expressed regret that they had no power to remit a fine when once imposed, and advised that the matter might be set right by the sanitary authority. The facts of this "miscarriage of

[1] THE LANCET, April 21st, 1894.

justice" are so meagrely reported that we refrain from commenting upon it in detail; but we are unable to pass by this case without urging the greatest caution on sanitary authorities as to the action which they take in the matter of notification certificates. The insistance on their strictly legal rights in cases where there has been either no intention to avoid compliance with the statute, or in which there has been some error of judgment, does a great amount of harm, and it is to be hoped that all medical officers of health will use their influence in checking the misguided zeal of certain authorities in this matter. We have before commented on another evil that has arisen in connexion with the system of notification, and that is the habit of certain medical officers of health of allowing themselves to be used by their authorities for the purposes of revising the correctness of the diagnoses given in certificates of notification. Even where there is error—and error must at times arise if the Act is strictly complied with and the certificate is sent as soon as the medical attendant feels, even provisionally, confident as to his judgment of the patient's case—every effort should be made to avoid proceedings, except where there is distinct evidence either of fraud or of an attempt to defeat the intentions of the Statute. This eminently useful Act really runs risk of doing mischief, and, if it does so, it will be mainly by reason of the indiscreet action of certain sanitary authorities and their officials.

THE EPIDEMIOLOGICAL SOCIETY.

AT the annual general meeting of this society, which was held on May 16th, an extremely valuable paper on the Distribution of the Mortality from Influenza in England and Wales during Recent Years was read by Dr. Franklin Parsons, of the Local Government Board. This paper we shall reproduce in full in our columns in an early issue. Dr. Payne, at the expiration of the usual term of office, resigned the presidential chair, and Mr. Shirley Murphy was elected president. The services of Dr. Hopwood, who resigned the senior secretaryship, were fortunately retained to the society by his election among the other members of the council, and Dr. Bulstrode was appointed to succeed him. The vacancy thus caused in the secretarial staff was filled by the appointment of Dr. Sidney Coupland. Professor Lane Notter was elected as secretary for the army, in place of the late Inspector-General Lawson, and Dr. Frank Clemow was appointed foreign secretary for Russia. Dr. Copeman and Dr. Willoughby have been nominated to represent the society at the forthcoming Congress of Hygiene and Demography at Buda Pesth. The society is to be congratulated on having obtained the services of Mr. Shirley Murphy as president. Mr. Murphy has always taken the deepest interest in its welfare, and for no less than twelve years has acted as honorary secretary to the society.

THE QUALIFICATION OF SANITARY INSPECTORS.

THIS is a subject on which there is a good deal of feeling just now. By the Public Health Act (London), 1891, Section 108 (2) (*d*), it is provided that after January, 1895, a sanitary inspector must hold the certificate of competency of such a body as the Local Government Board may approve, or that he must have been a sanitary inspector for three years in London or of an urban sanitary district out of London with not less than 20,000 inhabitants. The Local Government Board assigned the duty of examining candidates and granting them certificates to the Sanitary Institute, which body, it is allowed, has, on the whole, done the work well. Since 1892 it has examined 2431 persons and passed 1238. But, alas, in these days of rivalry there is a competition for examining work, and many other bodies wish, or are likely to wish to be allowed to give such certificates. Sir Walter Foster met a number of the representatives of such bodies in February and explained to them the pressure of applications of the sort and the danger of Ministers yielding to them, in which case there would be an evil comparable to that of twenty-one examining bodies of which we know something in the medical profession. He suggested that all bodies concerned, such as the Sanitary Institute, the Incorporated Society of Medical Officers of Health, the British Institute of Public Health, the Association of Sanitary and Municipal Engineers, the Institute of British Architects, the Plumbers' Company, and the National Health Society, should form a conjoint board to appoint examiners, whose certificates alone should in future be accepted by the Board. The Sanitary Institute, speaking through Sir F. Powell and Sir D. Galton, were naturally reluctant to part with a kind of monopoly which they have enjoyed under the present arrangement. But there is undeniable force in the views of Sir Walter Foster, and his suggestion seems likely to receive the approval of the above bodies. The subject was referred to a committee appointed by the Conference and now sitting. We are surprised to learn that one of the universities has been casting envious eyes at this piece of business. Surely universities have other functions than granting degrees of competency to sanitary inspectors.

THE DIFFUSION OF SMALL-POX.

EVIDENCES are not wanting of the wide diffusion of small-pox, both in the metropolis and in the provinces. In London the fresh attacks last week numbered 53, with 4 deaths, 3 of which, however, belonged to West Ham. At the close of the week the number of patients under treatment was 187 in the Metropolitan Asylums Board hospitals and 23 in the Highgate Small-pox Hospital, making a total of 210 cases—a further rise. In West Ham the attacks were 23. An epidemic of a somewhat alarming nature has broken out in some of the towns in South Staffordshire, among them being Willenhall, where at the end of the first week of May there were 55 cases under treatment. As a consequence several sites for an isolation hospital have been visited. Infection in a case isolated at Wolverhampton is supposed to have been derived at Willenhall. Further cases at Walsall have necessitated the re-opening of the hospital at Copy Hall. Cases at Coalville have been regarded as serious, since the space in the hospital is limited. In Hinckley matters are also becoming serious, as cases have been occurring numerously of late, and a great deal of concern has been locally manifested. It is sincerely to be regretted that the local board have not secured for themselves the benefit of compulsory notification, as its absence handicaps them in their desire to obtain early information of all cases of small-pox newly arising. In Smethwick 7 fresh cases arose last week, and 45 in Birmingham, with 6 deaths. Some little discussion has arisen in that city on account of the increase of small-pox cases in the workhouse, the Small-pox Hospital being credited as having been the cause by means of aerial dissemination of the infection. Five new cases have arisen in the Poor-law institution in the space of a fortnight. In Manchester last week there were 6 attacks and 1 death. Many other districts report invasion by small-pox during the week, but no very general prevalence of the disease has elsewhere been notified.

THE ROYAL SEA-BATHING INFIRMARY.

A MEETING of the subscribers and well-wishers of the Margate Infirmary for Scrofula was held on Wednesday, May 9th, at Grosvenor House, by permission of the Duke of Westminster. The Earl of Cranbrook, who presided, dwelt upon the distressing nature of the disease for the treatment of which the hospital was designed, and testified to the benefits that the inmates received from Margate air. The annual report showed that 140 beds out of 220 had remained

unoccupied during the year, and Lord Cranbrook regretted that insufficient pecuniary support has so gravely curtailed the good work of the infirmary. Earl Stanhope—having testified to the invaluable assistance that such a charity had been, and must be, for the poor and ill nourished, who were especially liable to the ravages of the disease, while precluded by their circumstances from obtaining the treatment by sea air and water, which in such conditions would sometimes act as a specific—moved a resolution deploring the position of the infirmary and pledging the meeting to pecuniary aid. Mr. J. Whitaker Hulke, in seconding the motion, referred briefly to the inimical action that the bright climate of Margate undoubtedly exercised upon the tuberculous parasite. Mr. W. K. Treves also testified to the practical nature of the benefits conferred upon the patients at the infirmary. Colonel Haygarth made a proposal, in the shape of a formal motion, that the public be invited to assist in raising the funds necessary to open the full number of beds. This was seconded by Dr. Russell Reynolds, and supported by Sir William Broadbent. We hope that the movement thus auspiciously inaugurated under the Presidents of the Royal Colleges of Physicians of London and Surgeons of England will bear ample fruit, and that the Royal Sea-Bathing Infirmary will promptly be placed by a generous public in a position to offer advantages to its proper complement of sufferers. Is it not time that the unmeaning term "scrofula" should be eliminated from the title of this deserving institution?

A MEETING of the delegates of the London Medical Schools is summoned for Wednesday next, at 5.30 P.M., "to consider the proposal that delegates be appointed by the medical schools, to join delegates from other institutions which have expressed a general approval of the recommendations of the Gresham Committee, with a view to pressing on the Government the importance of giving effect to those recommendations."

THOSE who are interested in the question of the Nile reservoirs and Philæ may be glad to have their attention directed to a paper by Sir Benjamin Baker, K.C.M.G., in the *Nineteenth Century* for the current month, in which the subject is discussed—more especially from an engineering, financial, and political point of view.

WE are informed that Mr. George Vere Benson, M.A. Cantab., B.A. Durham, M.R.C.S. Eng., L.R.C.P. Lond., and barrister-at-law, is yet another candidate for the appointment of Coroner of the North-Eastern District of the County of London.

PLEURO-PNEUMONIA AND CANADIAN CATTLE.

ONE of the most destructive and harassing of the contagious diseases of animals is that commonly known as the "lung plague" or contagious pleuro-pneumonia of cattle, which was introduced into this country fifty years ago, probably from Holland, and during that period it has proved a very serious scourge to the agriculture and dairying interests. Until quite recently, however, scarcely any effective steps were taken to limit its ravages, and certainly there appears to have been no idea entertained as to eradicating it from the cowsheds and pastures. On the continent of Europe it had prevailed generally for many years before it reached our shores, but with its advent here so little was known of its nature or infectiousness that it was not long before we began to export it with our cattle to our most distant colonies, some of which, as Australia and South Africa, have suffered, and are now suffering, most cruelly from its effects. The United States of America were also favoured with several visitations from it, and though it has not been allowed to extend to every part of that great territory, yet it has proved a source of heavy loss and trouble to many of the States. Not long after we became acquainted with it Dr. Willems of Hasselt, Belgium, discovered it to be an inoculable disease, and proposed the adoption of protective inoculation to limit its extension. This was the first step taken to combat the malady, but it was of little avail, and the measure received small attention on this side of the Channel, as it was adversely reported upon by an expert appointed by the Royal Agricultural Society to investigate it. This adverse opinion was probably based on the circumstance that inoculation with the virus of the disease did not produce the lung and pleural lesions characteristic of the affection; but there is ample evidence now accumulated to prove that the specific local disorder and general febrile condition induced by the inoculation confer immunity from the lung complaint; and the operation is practised on a large scale in such places as South Africa and Australasia, where the more heroic but less scientific measure of wholesale slaughter could not be ventured upon.

The success attending the eradication of cattle plague and foot-and-mouth disease by killing all the infected animals and those in the locality which might have been infected by them, at length caused the Legislature of Holland to attempt the extirpation of this no less formidable pestilence by the same procedure, and in a comparatively short time complete success was obtained. With such an example before her, England, which had been even more severely punished by the disease than Holland, determined to follow the same course and to drop the useless and embarrassing measures with which she had for some years trifled with the disorder. Unsparing slaughter of the infected and suspected animals, with compensation from the national exchequer to the cattle owners, produced the same result as in Holland, and now there is reason to believe that the country will soon be rid of the contagion. The great cost and hardship entailed by this action of the Government rendered necessary the adoption of precautions of a severe and rigid kind against the reintroduction of the disease from infected countries, and the carrying out of these precautions has not been unattended by much opposition and disputation. Among the countries whose cattle were sent of our ports, and which were placed on the scheduled list as infected, was Canada. The cattle trade with that industrious, progressive, and very loyal colony is of much importance to it, and is also of some moment to the stock-feeders of this country; so that the prohibition of admission of Canadian live cattle and their compulsory slaughter at certain ports were likely to cause some discontent on both sides of the Atlantic. This dissatisfaction has, most unfortunately, been greatly aggravated on the Canadian side by the feeling that the severe measure applied to its stock is unwarranted, and that contagious pleuro-pneumonia has not existed and does not exist in any portion of the Dominion. The cause for the exclusion of Canadian cattle is that, among the thousands continually imported, now and again one or two in a cargo have been found whose lungs, when the animals were killed, offered the lesions which are deemed to be characteristic of the disease by the experts of the English Agricultural Department. But others who have inspected these lungs are of a different opinion, and assert with the most pronounced confidence that the animals could not have been affected with the specific disease, and that the lesions were simply those of broncho-pneumonia or some allied and non-specific malady engendered by insanitary conditions and exposure to hardship during the voyage across the sea. They also point out that these cases are quite sporadic, only one or two occurring in a cargo at wide intervals, and that there never has been any indication of general contamination, such as would certainly be observed if the disease was of a contagious nature. Still more striking, perhaps, is the fact that there has been no trace found of the disorder in the localities from which the diseased cattle were derived, nor yet, as has been said, in any part of Canada; and we know from painful experience that contagious pleuro-pneumonia when introduced into a country—and especially into one like Canada—speedily makes its presence felt on every side. The Canadian Government has taken every means to assure itself that the disease is nowhere to be found within its boundaries, and it has put into operation measures which shall guarantee its non-admission from the United States if these should chance to have it. It has also offered to defray the expenses of any experts our Government might choose to send

in order to satisfy themselves of the exemption of Canada from this lung plague, an offer which has been refused.

It is not to be wondered at, therefore, that Canada feels rather sore at the treatment she is receiving at the hands of our Government and that the subject has given rise to much correspondence, the language employed being sometimes energetic and even pugnacious. From a Blue-book just published containing this correspondence, we find that our Colonial Minister, the Marquis of Ripon, is inclined to adopt the view of the Canadians and of those who, knowing the nature of the disease, can impartially judge what the facts should teach. In reply to a letter from the English Board of Agriculture he says :—

"The experts of the Board have, of course, unequalled opportunities of observing and distinguishing the post-mortem appearances of this disease, and if it were not that these admitted differences exist his lordship would have no hesitation in accepting their diagnosis; but the fact that such differences are acknowledged appears to his lordship to raise a strong presumption against the views of these officers, especially when they are not supported by any evidence of the actual communication of disease by one animal to another.....Nothing, moreover, has been advanced to show that the disease in question has been actually communicated by one animal to another, and, in the face of the admitted differences in the lesions from those of pleuro-pneumonia, the presence of causes specially tending to develop sporadic lung disease, and the strong negative evidence produced by the Canadian Government, Lord Ripon has great difficulty in accepting the view that it is merely a type of contagious pleuro-pneumonia, and that it is not a disease due to the hardships and exposure of the journey to this country.....As he (Lord Ripon) understands that the importation of store cattle does not usually begin till July or August, he hopes that the period of special examination which the Board propose to fix will not be extended beyond the middle of June, so as to allow time for making arrangements for that trade after the expiry of the period, if no further suspicious cases should be found. It must, however, be borne in mind that if the view maintained by the Dominion Government is correct such cases may not improbably occur during the early part of the season, and as the question of the nature of the disease cannot be advanced by further post-mortem examination he proposes to suggest to the Dominion Government that all cattle destined for this country should be carefully marked, so that they can easily be traced to the place of origin, and that in the event of any suspicious case being found the herd from which it came should be slaughtered, not with a view to settle definitely whether the disease was of a contagious character or not." There is nothing unreasonable in this argument, and it is what anyone not specially biased would endorse.

For some time, also, questions on this very disputable matter have been put and answered in the House of Commons, where the Minister of Agriculture has done his best to defend the course he has taken and to support the departmental experts whose counsel he has followed. But he has been compelled to modify his views somewhat in the face of the facts laid before him and which he could no longer ignore, and has therefore issued an Order (the Canadian Slaughter and Examination Order of 1894) stating that Canadian cattle may be landed only at certain wharves which are named; that there they shall be marked in a particular manner and kept apart from all other cattle; that they are only to be slaughtered in particular slaughter-houses, such slaughter to take place during such time as the Board of Agriculture may from time to time direct; that they are not to be removed from the slaughter-houses without the permission of the inspector of the Board, and in no case are the lungs of these cattle to be taken away from the wharf until they have been examined by the inspector of the Board. This order came into operation on the 15th inst., and it is to remain in force until the President of the Agricultural Department is satisfied that Canada is not an infected country, when he considers that he will be bound to dispense with slaughter at the ports, although some temporary regulations regarding the movement of animals after landing will probably be requisite.

In considering this matter from a scientific standpoint it is strange that there is no evidence to show that anything more than a simple examination of the diseased lungs has been relied upon in order to pronounce an opinion as to the nature of the disease. It is well known that inoculation with the fresh serum obtained from the lungs will produce effects which that derived from lungs affected with any other malady will not show. Surely this test might have been applied, especially as there was ample opportunity in each case for obtaining such material in a fit condition, the operation being simple and the time required to obtain a result very brief. This is something more than an economic or international question; it is one of scientific evidence, which our protracted experience of the disease should enable us to solve, and no stone should be left unturned to solve it satisfactorily on one side or the other. The experts on both sides cannot be right, and medical science should be in a position to declare which side is in error and so dispose of a dispute that has led to unpleasantness between this country and one of our most attached colonies.

CHOLERA.

THERE is not much to be recorded this week as to the progress of cholera. Intelligence about the renewed manifestations of the epidemic this year comes mainly from Russia. It is officially declared from Odessa that cholera prevails in seven governments of South Russia, where the disease, it is feared, is fast spreading. The official statistics of cholera in Russian Poland show that the districts of Plock and Radom are chiefly affected, and several cases have also appeared in the city of Warsaw. The disease also prevails in Kovno, Podolia, and Kieff. The Russian authorities have considerably extended their precautions this year, and the number of medical men in the threatened districts has been increased.

The disease is stated to have disappeared from Constantinople, and the quarantine to which vessels arriving from Turkey were subjected has been abolished.

Cases of diarrhœa, though considerably lessened in number, continue to make their appearance at Lisbon. The fact, however, that the bacillus discovered in the dejecta of the patients is identical with that found in the Lisbon drinking-water, and does not correspond with the bacillus described by Professor Koch and other bacteriologists as characteristic of Asiatic cholera, seems to have dispelled the alarm which was at first felt about the nature of the epidemic. Moreover, the mortality has throughout been quite insignificant, and leaves no doubt that the disease is not true cholera.

It may be interesting here to refer to the impressions which the proceedings of the Paris International Sanitary Conference appear to have produced in India. The *Times of India* says that if the Conference achieves nothing else it will have served the very useful purpose of clearing up a number of fallacies about quarantine; but the refusal of Turkey to sign the Convention, it considers, stultifies the proceedings to a great extent. The real breeding-ground of cholera, our contemporary asserts, is not India, and it goes on to declare that no amount of quarantine will ever serve to lessen the ravages of cholera so long as the insanitary condition of the quarantine station at Cameran, and of such places as Mecca, Medina, Jeddah, and El Tor remain in their present state. The cholera outbreak at Camaran among the previously healthy pilgrims on board the steamer *Sculptor* a few years ago is cited by way of illustration. The Indian Government has anticipated some of the more practical recommendations of the Conference, and there seems to be every disposition in India to carry out, as far as practicable, any reasonable suggestions. The *Times of India* urges, as a very vital condition of reform in the Red Sea traffic, a matter about which the Conference is silent, however—viz., the establishment of a sanitary board at Jeddah. It adds that with regard to the Persian Gulf the records may be searched in vain for evidence of cholera having travelled along that route.

IMPERIAL MARITIME CUSTOMS IN CHINA.

(MEDICAL REPORTS FOR THE HALF-YEAR ENDED SEPT. 30TH, 1890.)

THESE reports, which, in spite of the date of the events chronicled in them, have only just been issued, are published by order of the Inspector-General of Customs, Sir R. Hart, and edited by Dr. Alexander Jamieson of Shanghai. They

have been at different times the means of enriching and adding to our knowledge of tropical diseases, in proof of which we need only refer to the researches of Drs. Manson and Myers into the filaria sanguinis hominis.

The present report is the fortieth issue and contains contributions from the medical officers at the various Chinese Customs stations, and hardly attains to the excellence of several of the former ones, but nevertheless contains much interesting and important information.

Dr. Lynch, in his report on the health of Chinkiang, states that "cases of beri-beri are met with every summer, though the disease does not seem to be very widely prevalent. Both the 'wet,' or acute, and the 'dry,' or chronic, forms are found. There is an impression, I think, that only adults suffer from this disease, but three fatal cases which I saw in the summer of 1889 were all in children under twelve years of age. The symptoms of this curious malady form a perfect clinical picture of multiple neuritis. Moreover, there is little room for doubt that its essential cause is a specific micro-organism."

Dr. Alexander Rennie, in his report on the health of Tamsui and Keelung, says: "As a general rule the frequency and intensity of diseases of malarial origin may here be estimated by the degree of solar heat; but this standard is liable to be modified by the amount of rainfall preceding the hot period, and also by the extreme variations between the daily and nightly temperatures. During the past decade views as to the essential cause of malarial diseases have considerably changed, but prophylaxis and treatment remain the same. Whether we hold that malaria is a 'telluric poison' of a gaseous nature, or that it acts in virtue of a 'living ferment,' the fact remains that the maximum of danger is in the evening and early morning, and that the influence of the morbific agent diminishes as elevation above the level of the ground increases."

With reference to influenza, Dr. Lynch states that towards the end of March influenza was prevalent. The few cases among the foreign residents were not of a serious character. Among the Chinese, however, it raged with considerable virulence and was the cause of many deaths. Dr. Aldridge reports that the influenza epidemic which reached Ichang in April differed only from that which he personally experienced and witnessed in London at the beginning of the year in the mildness of the chest symptoms, which never indicated more than slight bronchial inflammation. Dr. Kirk states that in the winter and early in the spring the influenza epidemic made its appearance at Hoihad, but in a comparatively mild form; but few deaths were reported. During April and May of 1890 many cases of influenza occurred among the natives at Tamsui and Keelung, but most of the foreigners escaped. Dr. Morrison states that during the earlier half of the year there were a number of cases of influenza, but neither its extent nor its severity would entitle the disease to be ranked as epidemic. Mr. Henry Layng, in his report on the health of Swatow, says that in April some few additional cases of epidemic influenza occurred among the foreign residents, and all through the summer now and again a case was seen on board one of the steamers.

CHLOROFORM—HYDERABAD STATE.

WE have been asked by Surgeon-Lieutenant-Colonel Lawrie to publish the following correspondence:—

[TRUE COPY.]

COPY No. I. (No. 44-F. of 1894).

From the Residency Surgeon, Hyderabad, to the Private Secretary to H.E. the Minister, Hyderabad.

Dated Hyderabad Residency, April 23rd, 1894.

SIR,—I have the honour to inform you that I have received a letter from Dr. Gaskell[1] in which he intimates that he and Dr. Shore are ready to do some chloroform experiments in June, and that Professor Foster will place the physiological laboratory at Cambridge at our disposal if we wish to do experiments on our own account. Dr. Gaskell rightly presumes that the results of the conjoint experiments will be published together. I have also received a letter from Dr. Dudley Buxton,[1] in which he requests me to give demonstrations of the Hyderabad methods of chloroform administration at University College Hospital, London. 2. Will you therefore be good enough to obtain the sanction of H.H. the Nizam's Government for two of the recently passed men, who are good average chloroformists and as students assisted me in the Hyderabad cross-circulation experiments, to accompany me to England when I proceed on leave next month. The idea of performing experiments on my own account at Cambridge could not for obvious reasons be entertained; but I propose, with the Minister's permission, to write to Dr. Gaskell and thank Professor Foster for his offer, and at the same time state that if Drs. Gaskell and Shore will repeat their cross-circulation experiments His Highness's Government will be satisfied if they will allow us to give chloroform for them. With regard to Dr. Dudley Buxton's request I will reply that I shall be happy to demonstrate the Hyderabad method of chloroform administration at University College Hospital; but I shall at the same time lay before Dr. Dudley Buxton the advisability of placing a certain number of cases and students at our disposal, in order that I may perform the necessary surgical operations while my own assistants give the chloroform, and thus carry out in London precisely the methods which are followed here.

I have the honour to be, Sir, your most obedient servant,

(Sd.) EDWARD LAWRIE, M.B.,
Surgeon-Lieutenant-Colonel, Residency Surgeon.

[1] Copies enclosed.

TRUE COPY.]

COPY No. II. (No. 2149 of 1894).

From Faridoonji Jamshedji, Esq., Private Secretary to the Prime Minister, Hyderabad, to Surgeon-Lieutenant-Colonel E. Lawrie, M.B., Residency Surgeon, Hyderabad.

Dated Hyderabad, April 26th, 1894.

SIR,—I have the honour to acknowledge your letter No. 44-F., dated April 23rd, 1894, enclosing copies of Dr. Gaskell's and Dr. Dudley Buxton's letters, inviting you to perform experiments at Cambridge and to demonstrate your method of chloroform administration at University College Hospital, London. 2. The Minister has already issued orders for two of the recently passed men to accompany you to England, and his Excellency fully approves of the way in which you propose, in reply to Drs. Gaskell and Dudley Buxton, to demonstrate the Hyderabad method of giving chloroform in the laboratory at Cambridge and in the operating theatre at University College Hospital. 3. The Minister has observed in the Hyderabad Commission's Report that you are "prepared to produce uniform effects with chloroform in any laboratory or operating theatre in the world." An opportunity is now afforded you of making good your declaration, and it only remains for his Excellency to add that the Nizam's Government will await the result with confidence and interest.

I have the honour to be, Sir, your most obedient servant,

(Sd.) FARIDOONJI JAMSHEDJI,
Private Secretary to the Prime Minister.

To the Editors of THE LANCET.

SIRS,—Surgeon-Lieutenant-Colonel Lawrie, M.B., has kindly sent me a copy of a correspondence in which my name appears. As there is some misapprehension in this I shall be obliged—if the same printed correspondence has been sent to you—if you will also publish this correction. In writing privately to Mr. Lawrie I said that I should be pleased if he would personally demonstrate his way of giving chloroform at University College Hospital, and that I would willingly regard myself for the nonce as a pupil and follow his directions. His suggestion that he should operate and that his native pupils should chloroform would not fulfil the desired conditions, nor have I the power to grant permission. I will, however, place Mr. Lawrie's request before the proper authorities. It is to my mind most important that Mr. Lawrie should personally give the chloroform, and in cases which present such exceptional difficulties—e.g., excisions of jaws, removal of tongues, post-nasal growths, &c.—as fall to the lot of London chloroformists, and I trust Mr. Lawrie may see his way to so doing,

I am, Sirs, your obedient servant,

Portland-place, W., May 15th, 1894. DUDLEY W. BUXTON.

WE understand that the jury appointed at the International Medical Congress recently held in Rome have awarded the only gold medal presented to exhibitors in the Pharmacological Department to Messrs. Oppenheimer, Son, and Co., for their method of administering drugs in palatinoids and bi-palatinoids.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Stoke-upon-Trent Urban Sanitary District.—The cost of working the Notification Act in this district with a population of 25,345 was in 1893 £62 2*s.* 6*d.* The infantile mortality of the district was 159 per 1000 births, and Dr. Samuel Johnson states that a large proportion of the mortality may be traced to the employment of women in factories or at work which necessitates their absence from home, and consequent neglect of their infants. In referring to the dairies and milkshops, Dr. Johnson expresses the opinion that they should be registered. Certainly the cowkeepers, dairymen and milkmen should be registered, and if they are not, obviously the sanitary authority is neglecting to carry out the provisions of the Dairies, Cowsheds and Milkshops Order of 1885. Steam trams are now used in Stoke-upon-Trent, and apparently they give rise to some annoyance on account of the smoke emitted from them. The corporation have, we are glad to see, appointed a farm bailiff to superintend their sewage farm, instead of, as heretofore, letting it to a tenant. The Staffordshire County Council appear to be doing good work in the district with reference to the inspection of the water courses.

Mile End Old Town Urban Sanitary District.—Mr. Thomas Taylor reports that he was able to trace some sixteen cases of small-pox to a case of that disease which had been mistaken for chicken-pox, and by means of a house-to-house inspection of the neighbourhood he discovered a case of small-pox in a bedroom, occupied also by two sisters who were in business in the City during the day. There were 356 cases of diphtheria notified during 1893, and in regard to them Mr. Taylor remarks: "I have strong reason to believe that a number of these cases were not true diphtheria, but what are termed diphtheritic sore-throat, which may mean anything between simple congestion and ulcerative tonsillitis"; and he adds "that in order to be on the safe side every precaution was taken with regard to isolation &c." Obviously this was the only course that could be taken under the circumstances, since the cases were notified to Mr. Taylor definitely as diphtheria; and when there was no doubt as to the *bonâ-fide* nature of the notification he was bound to act upon the certificate. In a part of the Mile End district known as West Ward overcrowding was reported to exist, and Mr. Taylor, in company with the sanitary inspector, made, during 1893, an inspection of some of the worst parts between 10 P.M. and 1 A.M. The result was that in very few cases was there any overcrowding as judged by the standard of 300 cubic feet per head, and Mr. Taylor remarks that probably the reports as regards overcrowding have been exaggerated. We are glad to see that a House of Shelter has been provided for the district. Some valuable work has been done recently in the Mile End district under the Factory and Workshops Acts, and Mr. Taylor gives in his report a list of the workshops in his district, together with notes on their sanitary condition.

Basford Rural Sanitary District.—The fees for carrying out the Notification Act in this district for the last four years have averaged 18*s.* 1½*d.* per 1000 of the population. As regards water-supply, an exhaustive scheme has been prepared to supply by gravitation, and on a constant service, the villagers in one of the parishes in the district. A site has also been selected and the plans prepared for a fever hospital in a centrally situated position, and application has been made to the Local Government Board for sanction to borrow £11,000 to cover the necessary expenditure. In commenting upon some of the elementary schools in his district Dr. Scott Tew remarks: "The considerable number of hours per week which the children and the instructors, under the present exigencies of modern education, are required to spend in the schoolroom calls for better methods of ventilation and warming than those I usually meet with."

The Public Health in the First Quarter of 1894.—The Registrar-General's quarterly return for the first quarter of this year, which has just been issued, shows that the annual death-rate in England and Wales during that period was equal to 20·0 per 1000 of the estimated population in the middle of this year, and was 1·7 per 1000 below the average rate in the corresponding quarters of the previous ten years. In the different registration counties, the death-rate ranged from 16·4 in Middlesex, 16·5 in Westmorland, and 16·8 in the North Riding of Yorkshire, to 23·0 in Herefordshire, 23·9 in Cornwall, and 25·5 in Devonshire. One of the most noticeable features in the mortality returns for the past quarter is the excessive mortality in many rural counties, which may probably be attributed to the fatal effects of influenza, as a similar excess of rural mortality occurred in the first quarter of 1892, when influenza was still more fatally prevalent. In the first three months of this year the normal death-rate in the thirty-three largest English towns was equal to 21·0 per 1000; in sixty-seven other large towns it was 18·6, and in the rest of England and Wales—that is, excluding the 100 largest towns, the rate was 19·6, and but slightly below the mean rate in England and Wales. These figures show a relatively exceptionally high death-rate in rural England and Wales. In the thirty-three largest towns the death-rates last quarter ranged from 16·1 in Croydon and 16·4 in Portsmouth to 25·9 in Liverpool and in Norwich, and 28·1 in Plymouth. The annual death-rate from the principal zymotic diseases in England and Wales last quarter was equal to 1·76 per 1000, against a mean rate of 1·83 in the corresponding quarters of the ten preceding years. This zymotic death-rate was 2·42 in the thirty-three great towns, 1·60 in the sixty-seven other large towns, and 1·35 in the remaining and mainly rural districts. The most fatal zymotic disease last quarter was whooping-cough, but this fatality very slightly exceeded the average. The next disease in order of fatality was, however, diphtheria, which caused 2462 deaths, equal to a rate of 0·33 per 1000, whereas the mean rate in the ten preceding corresponding quarters was only 0·19; the highest rates occurred in the mainly rural counties of Rutland, Cambridge, Essex, and Huntingdon. Diphtheria showed exceptional fatality in Cardiff, Salford, Birkenhead, London, and West Ham. The death-rates from measles, scarlet fever, and "fever" (mainly enteric) were all below the average rates in recent corresponding periods. Scarlet fever caused the highest rates in Lancashire, especially in Liverpool and Burnley; enteric fever showed fatal prevalence in Norwich Nottingham, Sunderland, and Liverpool. The fatal cases of small-pox in England and Wales last quarter were 308, against 315 in the last three months of 1893; this number included 161 in the thirty-three great towns (of which 66 occurred in Birmingham, 22 in Bradford, 21 in West Ham, and 19 in Oldham), 26 in the sixty-seven other large towns, and 121 in the rest of England and Wales. It is satisfactory to note that small-pox was somewhat less fatal last quarter than in the first quarter of 1893; since the end of the quarter, however, the prevalence of this disease in London has shown a somewhat ominous increase.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6231 births and 3649 deaths were registered during the week ending May 12th. The annual rate of mortality in these towns, which had been 18·3 and 17·2 per 1000 in the preceding two weeks, rose again last week to 18·2. In London the rate was 18·4 per 1000, while it averaged 18·1 in the thirty-two provincial towns. The lowest rates in these towns were 9·5 in Derby, 10·3 in Burnley, 10·5 in Brighton, and 12·6 in Croydon and in Swansea; the highest rates were 20·8 in Birmingham and in Manchester, 22·1 in Wolverhampton, 23·3 in Salford, 23·8 in Liverpool, and 25·2 in Birkenhead. The 3649 deaths included 585 which were referred to the principal zymotic diseases, against 558 and 546 in the preceding two weeks; of these, 232 resulted from measles, 139 from whooping-cough, 74 from diphtheria, 55 from scarlet fever, 40 from diarrhœa, 31 from "fever" (principally enteric), and 14 from small-pox. No fatal case of any of these diseases occurred last week in Preston; in the other towns they caused the lowest death-rates in Brighton, Derby, Burnley, and Halifax, and the highest rates in London, Nottingham, Salford, Birmingham, and West Ham. The greatest mortality from measles occurred in London, West Ham, Birmingham, Nottingham, and Salford; from scarlet fever in Salford; from whooping-cough in Croydon, Bristol, Cardiff, Birmingham, and Nottingham; and from "fever" in Sunderland. The 74 deaths from diphtheria included 55 in London, 2 in West Ham, and 2 in

Birkenhead. Six fatal cases of small-pox were registered in Birmingham, 4 in London, 2 in Bradford, 1 in Manchester, and 1 in Oldham, but not one in any other of the thirty-three towns. There were 210 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, May 12th, against 148, 151 and 191 at the end of the preceding three weeks; 71 new cases were admitted during the week, against 59, 47, and 64 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals, and in the London Fever Hospital at the end of the week was 2298, against 2172, 2258, and 2293 on the preceding three Saturdays; 262 new cases were admitted during the week, against 296 and 268 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 304 to 237 in the preceding three weeks, rose again to 272 last week, but were 66 below the corrected average. The causes of 73, or 2·0 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Bolton, Sunderland, Newcastle-on-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·0 and 20·1 per 1000 in the preceding two weeks, declined again to 19·8 during the week ending May 12th, but was 1·6 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·6 in Leith and 17·7 in Paisley to 21·4 in Glasgow and 22·4 in Perth. The 566 deaths in these towns included 39 which were referred to whooping-cough, 13 to diarrhœa, 9 to scarlet fever, 9 to diphtheria, 7 to "fever," 4 to measles, and 1 to small-pox. In all, 82 deaths resulted from these principal zymotic diseases, against 73 and 77 in the preceding two weeks. These 82 deaths were equal to an annual rate of 2·9 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The deaths from whooping-cough, which had increased from 18 to 40 in the preceding three weeks, were 39 last week, of which 21 occurred in Glasgow, 11 in Edinburgh, and 3 in Greenock. The fatal cases of scarlet fever, which had increased from 3 to 7 in the preceding three weeks, further rose to 9 last week, and included 4 in Glasgow, 3 in Edinburgh, and 2 in Perth. The deaths referred to diphtheria, which had been 14 and 10 in the preceding two weeks, further declined to 9 last week, of which 5 occurred in Glasgow and 2 in Edinburgh. The 7 fatal cases of "fever" slightly exceeded the number in the preceding week, and included 3 in Glasgow and 2 in Dundee. The 4 deaths from measles occurred in Dundee and the fatal cases of small-pox in Leith. The death referred to diseases of the respiratory organs in these towns, which had been 107 and 95 in the preceding two weeks, rose again to 110 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 45, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 23·3 to 24·6 per 1000 in the preceding three weeks, declined again to 20·3 during the week ending May 12th. During the past six weeks of the current quarter the death-rate in the city has averaged 23·5 per 1000, against 18·4 in London and 17·6 in Edinburgh. The 136 deaths registered in Dublin during the week under notice showed a decline of 29 from the number in the previous week, and included 12 which were referred to the principal zymotic diseases, against 16 and 9 in the preceding two weeks; of these, 8 resulted from whooping-cough, 2 from diarrhœa, 1 from scarlet fever, 1 from enteric fever, and not one either from small-pox, measles, or diphtheria. These 12 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rate during the same period being 3·7 in London and 4·0 in Edinburgh. The deaths referred to whooping-cough, which had been 6 and 3 in the preceding two weeks, rose again to 8 last week, a higher number than in any week since February last. The 136 deaths in Dublin last week included 26 of infants under one year of age and 26 of persons aged upwards of sixty years; the deaths of infants differed but slightly from those recorded in recent weeks, while those of elderly persons were considerably below the number in any week during the current year. Five inquest cases and 3 deaths from violence were registered; and 40, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN DUGGAN has arrived from the West Coast of Africa after a tour of service, and Surgeon-Major Wallis has come home on leave from India. Surgeon-Captains Kelly and Begbie have re-embarked for India after leave of absence, and Surgeon-Captain Lane has arrived from India in the *Malabar*. Surgeon-Major Hoysted has proceeded from the North-Western District to Aldershot with the 13th Field Hospital. Surgeon-Major Asbury has been transferred from Woolwich to Dublin. The arrival of Surgeon-Major Reade in Hong Kong and of Surgeon-Captain Wilson at Sierra Leone is reported. Brigade-Surgeon-Lieutenant-Colonel W. F. Stevenson, Professor of Military Surgery, has made over the charge of the Surgical Division of the Royal Victoria Hospital, Netley, to Surgeon-Captain H. Whitehead, F.R.C.S.Eng., Assistant Professor of Surgery. Surgeon-Lieutenant-Colonel H. H. Stokes is transferred from the Surgical to the Medical Division of the Royal Victoria Hospital, Netley, and Surgeon-Captain D. Bruce is appointed to act as Invaliding Officer for the Surgical Division of that hospital. Brigade-Surgeon-Lieutenant-Colonel G. J. H. Evatt, M.D., has been appointed Registrar and Secretary to the Principal Medical Officer, Netley, and to command the Netley companies of the Medical Staff Corps. It is expected that he will take over the charge from Surgeon-Major W. Pope early in next month.

ARMY MEDICAL STAFF.

Surgeon-Colonel John Colahan, M.D., to be Surgeon-Major-General, vice W. Collis, retired; Brigade-Surgeon-Lieutenant-Colonel Charles F. Churchill, M.B., to be Surgeon-Colonel, vice J. Colahan, M.D.; Brigade-Surgeon-Lieutenant-Colonel William A. Catherwood, M.D., to be Surgeon-Colonel, vice A. C. Gaye, deceased; Surgeon-Lieutenant-Colonel Alexander Anderson to be Brigade-Surgeon-Lieutenant-Colonel, vice C. F. Churchill, M.B.; Surgeon-Lieutenant-Colonel James Fraser, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice W. A. Catherwood, M.D.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced: Surgeon-Major Ranking to succeed Colonel Jarrett as Assistant Secretary to the Vice-regal Council; Surgeon-Major F. F. Perry, Professor of Surgery in the Lahore Medical College, to officiate as Ophthalmic Surgeon and Professor of Ophthalmic Surgery in the Medical College, Calcutta, during the absence of Surgeon-Lieutenant-Colonel R. C. Sanders. Surgeon-Lieutenant-Colonel R. Temple Wright, Civil Surgeon, Shahjahanpur, to be in Visiting Medical Charge of Hardo in addition to his other duties. Surgeon-Captain J. Morwood, Civil Surgeon, Saltanpur, to officiate as Superintendent, Central Prison, Lucknow, until further orders. The services of Surgeon-Captain C. Duer, M.B., F.R.C.S., I.M.S. (Bengal), are placed temporarily at the disposal of the Chief Commissioner of Assam. The services of Surgeon-Captain P. C. H. Strickland, I.M.S., and of Surgeon-Major A. F. Ferguson, M.B., C.M., are replaced at the disposal of the Commander-in-Chief. Surgeon-Captain D. M. Davidson, Superintendent of the Central Gaol at Montgomery, is posted to Gurdaspur as Civil Surgeon. Surgeon-Major L. T. Young, Civil Surgeon, is transferred from Murree to Umballa. Surgeon-Major H. Armstrong has delivered over, and Surgeon-Lieutenant-Colonel T. Mayne assumed, charge of the office of the Residency Surgeon at Bangalore. Surgeon-Colonel J. Cleghorn, M.D., Inspector-General of Civil Hospitals, Punjab, has been granted leave for eight months.

NAVAL MEDICAL SERVICES.

The following appointments are notified: Fleet-Surgeons: W. D. Wodsworth, to the *President*; J. Tyndall, to the *Empress of India*. Staff-Surgeons: E. J. Riden, to

the *Mersey*, temporary. A. J. Johnston, to the *Blenheim*. Surgeons: E. B. Pickthorn, to the *Rodney*; W. J. Colborne, to the *Ruby*; O. W. Andrews, to Haslar Hospital; J. Shand, M.B., to Chatham Hospital; F. J. A. Dalton, to the *Blenheim*; G. Ley, to the *Active*; E St. M. Nepean, to the *Volage*.

YEOMANRY CAVALRY.

Nottinghamshire (Southern Nottinghamshire): Surgeon-Lieutenant J. F. D. Willoughby to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Dorsetshire (Southern Division, Royal Artillery): Surgeon-Lieutenant R. Denman resigns his commission.—*Rifle:* 2nd Volunteer Battalion, the Gloucestershire Regiment: Surgeon-Captain A. A. Hogarth, M.B., resigns his commission.—2nd Volunteer Battalion, the Welsh Regiment: Surgeon-Lieutenant J. A. Jones to be Surgeon-Captain.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General St. John Stanley died on the 4th inst. at Wrexham. He was appointed surgeon in 1864 and obtained the rank of Hon. Deputy-Surgeon-General and placed on the half-pay list in 1882. He went through the Indian Mutiny and the Abyssinian and Boer Wars, and was some time with the 3rd Dragoon Guards and 25th King's Own Scottish Border Regiment.

We regret to notice an announcement of the death of Dr. Archibald Graham at Edinburgh, at the advanced age of ninety-five. The deceased was an old officer of the East India Company, and retired after having held the post of an Inspector-General of Hospitals, Bombay. He matriculated in medicine at Edinburgh University shortly after Waterloo, entered the old East India Company's service, and left it on the expiration of its charter.

THE LATE SURGEON-COLONEL GAYE.

The British Medical Service lost an excellent officer and the Indian sporting world one of its most accomplished riders and keenest sportsmen by the recent death of this officer at Bangalore. His funeral was one of the largest and most impressive ever seen at Bangalore, which was the deceased officer's station during the earlier part of his military career and of his early triumphs in racing and pig-sticking. He died from the effects of dysentery after a brief illness, to the great grief of a large circle of friends and admirers, by whom he will be long remembered as one of the straightest and most honourable of men, as well as one of the keenest and pluckiest of riders and sportsmen. Surgeon-Colonel Gaye took part in the Perak expedition, was present at the capture of Kinta, and was mentioned in despatches. He served in the Royal Horse Artillery and also in the 14th Hussars.

THE LATE INSPECTOR-GENERAL BRUCE, BENGAL MEDICAL SERVICE.

We briefly referred in THE LANCET of last week to the death of Principal Inspector-General of Her Majesty's Forces Dr. H. A. Bruce, late of the Bengal Medical Service, in the eighty-seventh year of his age. The late officer returned to England and retired from the service in September, 1866. His career in India, as recently detailed in *The Times*, was a very long, varied, and remarkable one. He was appointed to the Bengal Medical Service in 1830 and rose through all the administrative grades to be its head. He took part in a large number of military expeditions and marches. In 1832 he joined the field force against the insurgent Khols. In 1838 he joined the army then assembling at Ferozepore for the invasion of Afghanistan, and accompanied it to Cabul, was present at the storming and capture of Ghuznee in 1839, and remained in Cabul during the severe winter of that year. In September, 1840, he crossed the Hindoo Khoosh with Brigadier-General Dennie's force, and was present at the battle of Bamian. In 1841 he was appointed surgeon to the envoy at Herat, and subsequently made some remarkable marches through Quetta, the Bolan Pass, and Scinde. He took part in the Sikh war, and was present at the defence of Loodianah and at the battles of Aliwal and Sobraon. He left Cawnpore just before the great Indian Mutiny, thus escaping the massacre at that station. He subsequently became Deputy Inspector-General at Umballa, then Inspector-General of the Upper Provinces, and in 1864 Principal Inspector-General at Calcutta.

VOLUNTEER AMBULANCE INSTRUCTION.

The official examination and inspection of the class of Regimental Stretcher-bearers which has been under training since February last was made by Surgeon-Major J. J. Lamprey, Army Medical Staff, assisted by Surgeon-Captain Sparke, medical officer in charge of troops at the Tower of London, on May 10th, at the Headquarters of the 20th Middlesex Artists R.V. Surgeon-Captain R. R. Sleman, Artists R.V.; J. B. Norman, Newcastle-on-Tyne Vol. Art.; Surgeon-Lieutenants M. M. Thomas, 2nd Glos. Vol. R.E.; R. Dudfield, M.B., 26th Middlesex Cyclists R.V.; and H. Sanders, 17th North Middlesex R.V., were also present. At the conclusion of the examination Surgeon-Major Lamprey addressed the class and congratulated Surgeon-Major H. F. Stokes, the Senior Medical Officer Instructor, on the general efficiency and individual knowledge displayed by the class, and said he should have much pleasure in recommending the whole class for the Army Ambulance Certificate. The next class will commence at the Headquarters of the London Rifle Brigade on Monday, October 1st, at 7.30 P.M.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester companies of the Volunteer Medical Staff Corps, under the command of Surgeon-Captain William Coates, arrived at the Royal Victoria Hospital, Netley, on Saturday, the 12th inst., for their annual training in hospital work. The men, who are accommodated under canvas in the rear of Netley Lodge, will remain at Netley until the morning of Saturday, the 19th inst. The detachment consists of four officers and about 120 non-commissioned officers and privates. They attended church at the garrison chapel on Sunday morning and on Monday paraded for company drill and commanding officers' parade.

MOBILISATION OF FIELD HOSPITALS.

The Times announces in its naval and military intelligence that the 4th and 13th Field Hospitals and 3rd and 4th Bearer Companies were mobilised at Aldershot on the 15th inst., men of the Medical Staff Corps being brought in from other districts for the purpose.

THE ARMY PENSIONERS' ASSOCIATION.

We understand that the Secretary of State for War is drawing up a scheme to meet the views of the Army Pensioners' Association, which is agitating for the abolition of Chelsea and Kilmainham Hospitals and the substitution of increased pensions for old soldiers.

THE MEDICAL STAFF CORPS.

As we anticipated in THE LANCET of April 28th, two Field Hospitals and two Bearer Companies have now been mobilised at Aldershot. Hitherto the facilities for training the medical officers and men of the Medical Staff Corps have not been of a nature to ensure a practical knowledge of the duties required of them in time of mobilisation and war, but under the present arrangements the training will approach as near to the necessary requirements as possible. The 4th and 13th Field Hospitals and the 3rd and 8th Bearer Companies are the first selected. Next month two more field hospitals and two bearer companies will also train at Aldershot.

Reuter's Agency states that the Government have entered into an arrangement with the Peninsular and Oriental Company whereby two of the company's largest steamers, the *Britannia* and the *Rome*, have been chartered for the purpose of conducting the Indian trooping work for the season 1894-95, beginning in September next.

H.M.S. *Malabar* arrived at Portsmouth on the 13th inst. with 382 patients for Netley.

ROYAL METEOROLOGICAL SOCIETY.—The monthly meeting of this society was held on Wednesday evening, the 16th inst., at the Institution of Civil Engineers, Westminster, Mr. R. Inwards, F.R.A.S., President, in the chair. Mr. W. Ellis, F.R.S., read a paper on the Relative Frequency of Different Velocities of Wind, in which he discussed the anemometer records of the Greenwich Observatory for the five years 1888-92 with the view of ascertaining the number of hours during which the wind blew, with each of the different hourly velocities experienced during the period. The results of this discussion show that the wind blew for the greatest number of hours with the hourly velocities of ten and eleven miles. Mr. W. Marriott, F.R. Met. Soc., gave an account of a series of observations on the Audibility of "Big Ben" at West Norwood. A paper by Mr. A. W. Moore was also read on Earth Temperatures at Cronkbourne, Isle of Man, 1880-89.

Correspondence.

"Audi alteram partem."

THE DIAGNOSIS OF RUBELLA (OR RÖTHELN).

To the Editors of THE LANCET.

SIRS,—The interesting and pointed letter by Mr. Bridgman on this subject in THE LANCET of April 21st, and my own conviction that the recently repeated dicta of Dr. Dukes, alluringly precise though they seem, are of no great practical value even in groups of cases of suspected rubella and of scarcely any in single cases, induce me to beg space for the following remarks. I am not one of those who deny the existence of cases of exanthematic fever, both single and in groups, which bear a greater or less resemblance in many particulars to measles or scarlet fever, and may have a claim to independent nosological position, but I venture to doubt gravely and would almost deny that either the collated experience of most writers on this matter, or the strongest utterances of any, supply us with valid reasons for teaching that such cases constitute a distinct pathological or clinical entity, specific and indivisible. "There is a much wider discrepancy," as I have elsewhere said, "in almost all points between the many descriptions of so-called "rubella" by numerous observers in various epidemics and different countries than obtains in the matter of any other recognised specific fever." I believe that a careful study of Dr. Dukes' own paper alone will rather bear out than traverse this contention, and that the numerous and important disagreements and even contradictions to be found in the extensive literature of this subject point strongly to the conclusion that if there be one there are almost as certainly more than one clinical group of symptoms which equally deserve an independent title to specificity. Apart from the important fact of the epidemic occurrence of an exanthematic fever of the kind or kinds under discussion among those who have recently or previously suffered from scarlet fever or measles, it is hardly too much to say that the rubella, or rötheln, or epidemic roseola of to-day has no greater mark of individuality than appertains to recognised varieties of the two diseases from which its distinction is sought or asserted. I cannot attempt here to quote authorities in justification of these statements, but those who will read the various first-hand papers and monographs on the subject, both European and American—not omitting the discussion at the International Medical Congress held in London in 1881—will find, among many other discrepancies, that signs said to be wellnigh pathognomonic by some are pronounced exceptional by others. I will but instance here that many regard enlargement with tenderness of the glands, especially of those behind the sterno-mastoid, as almost constant, while others say it is rare, and that there is nothing like consensus of opinion as to the occurrence of invasion symptoms before the rash, the prevalent presence or absence of coryza, of inflammatory sore-throat, or of complications and sequelæ, or as to the frequency, nature, and duration of desquamation.

It may, perhaps, be scarcely fair to regard the dilemma, on the horns of which Mr. Bridgman has placed Dr. Dukes, as perfectly established without referring to Dr. Dukes' original paper, as he requests his critic to do; but, considering the extreme clearness of Dr. Dukes' own extensive abstract, and the specific nature of Mr. Bridgman's statements and quotations, it would appear almost incontrovertible that on a certain occasion either Dr. Dukes made an erroneous diagnosis or that his own rules, and these of no little importance to his position, played him false. It is, indeed, chiefly against the justification of any such hard-and-fast rules as Dr. Dukes strives—I would almost say, after a careful reperusal, struggles—to lay down, that I would here strongly plead, for I continue to believe that in the present state of our knowledge a positive diagnosis of "German measles," or a positive exclusion of scarlet fever and measles, should hardly ever be made, and never early, in any individual case; and that perhaps the only really practical sanction for a decisive statement is the occurrence of a subsequent series of like instances of illness, with the test of most of its subjects having previously suffered from the disease, be it scarlet fever or measles, which it most nearly resembles. I use the word "practical" here in its limited and literal sense; for, as I have said, I think there is much evidence to show that there is more than one disease described under the name of "German measles" &c., and I could not absolutely deny that, all likelihood to the contrary notwithstanding, this affection may conceivably be etiologically one. I may briefly mention a few points in Dr. Dukes' abstract, published in THE LANCET of March 31st, 1894, which, I venture to think, are open to more or less question from a practical point of view. Would many endorse his statement that "rose rash" (or German measles) is as *separable* (Dr. Dukes does not say "separate") from measles or scarlet fever as typhus fever is from typhoid fever? Is the average seasonal prevalence of these diseases under discussion of any *material* aid to us in the differential diagnosis of either sporadic or serial cases of exanthematic fever? Is it right to assume, in the face of many opinions, and I would add no few facts to the contrary, that "when it is affirmed that a boy has had measles twice, it generally only means, of course, that he has had English and German measles"? And as regards the question of glandular enlargement, which after all seems, on due sifting of his points, one of quite the most important of Dr. Dukes' *differentiæ*, especially from scarlet fever, I think that many can say, as I have myself observed, that it is not very rare to find enlargement of the very glands mentioned even in early scarlet fever of no severe type and without bad throat symptoms.

To conclude, I recognise the existence of cases at first like scarlet fever which prove not to be scarlet fever, but do not answer to any sufficiently well-established type, so as to justify their appellation of German measles or any other individual names; and similarly, there are cases which seem like measles in many particulars, but which almost as certainly are not measles. Now, apart from epidemics of such cases, when it does not much matter for practical purposes whether or not we anticipate positive knowledge by calling them "rubella," "rötheln," or "epidemic roseola," I think it is better to confess ignorance, and even unnecessarily isolate the patients at first when we are questioning—as even the best authorities who have no shadow of doubt of the unity and indivisibility of epidemic roseola sometimes must be questioning—as to the nature of an individual case, than to run a risk, however small it may be, of acquitting a patient of measles or scarlet fever. I personally believe this risk to be no small one, and I know and could quote many very striking instances of mistakes made in this direction by those who have had great experience in this class of diseases and are recognised as authorities, as well as by others who have merely been called in to give second opinions.

Doubtless a firm conviction and a clear expression of opinion as to the nature of all cases of infectious disease, especially early in their course, are great desiderata, especially in practice. In the matter of the diagnosis of infectious fevers, moreover, practitioners are sometimes tempted, perhaps even unto non-resistance, to pronounce in favour of "German measles" when a case seems open to doubt, owing to the great popularity of this diagnosis with the proprietors of private schools. Practical danger to the patient and others may be avoided in case of a mistake by carefully isolating the suspected children; and such a mistake, however it may be regarded by the family of the patient, is then at least a venial one in the eyes of the schoolmaster. But to pronounce that a case is scarlet fever when it may be ultimately proved otherwise, or even but stated by another to be German measles, is often very damaging in practice. As regards the name of this disease, or of these diseases, where scarlet fever and measles are to be excluded, the current polyonomy may not be regrettable; but if we are begged to "give it a name" I think *rubella* is the best, being one word and easily pronounced by the profession and the public of all countries.—I am, Sirs, yours truly,

Harley street, W., May 4th, 1894. H. B. DONKIN.

"THE SURREY DISPENSARY AND ITS STAFF."

To the Editors of THE LANCET.

SIRS,—In reference to the letter on the above subject by Dr. Ince in THE LANCET of April 28th, will you kindly allow me, as a member of the staff, to make a few remarks? It is true that some of the members of the staff have been attached to the dispensary for many years, and, if by lapse of time they are unfit to perform their duties, surely a gentleman who, like

Dr. Ince, was house surgeon there forty years ago should be the last to say so; for if they are too old to do good work he must be too old to criticise. The chairman of the annual meeting of the governors on April 24th told Dr. Ince, in reply to the same charges that he brings against us in his letter to you, that during the few years that he had been much about the place nothing of the kind had occurred.

I looked the other day carefully through the attendance book, which Dr. Ince cites in support of his charges, and found that once only in three years had a member of the staff been as much as fifty minutes late. In my own case I carefully tabulated all the times of my arrival during that period and discovered that I had been punctual or before time in 90·08 per cent. of my attendances, within fifteen minutes in 8·63 per cent., thirty minutes late in 0·66 per cent., and absent in 0·66 per cent. Considering that I am in general practice and hold Poor-law appointments, I don't think that is a bad record. I wish I were as punctual at my meals or bed.

Patients have never—during recent years, at all events—been kept waiting for two or three hours through the unpunctuality of the staff. The rate of seeing patients mentioned by Dr. Ince is far beyond anything we ever attempt. I have never heard that Dr. Ince was present at the dispensary during business hours and much fear that somebody has been hoaxing him.

I never have more than two patients in the consulting-room at the same time, and as I am the culprit referred to who examined a woman's chest in the presence of another woman, I simply state, as I did to the committee who judged me (this, by the way, was four or five years ago) that I decline to examine an unknown female, of the class from which our patients are drawn, without having another woman present, and I think that any decent woman would prefer to have one of her own sex present while she was being examined. When I was appointed surgeon in 1879 I was told by the chairman that I should not have to visit patients at their own homes except in some emergency, and I took the appointment on those terms.

Had I then been told that for fifty guineas per annum I should have to make some dozen visits twice a week to patients scattered over the district extending from Vauxhall Bridge to Camberwell Gate, and thence to Cherry Garden Pier, a mile below the Tower Bridge, in addition to my dispensary duties, I should have declined the appointment. Moreover, I was house surgeon at the Surrey Dispensary from 1870 to 1873 and as such visited all the home cases and attended difficult labours, only calling in the assistance of the staff in exceptional cases, precisely as has been done ever since and is at this present. I have not the smallest objection to the governors having authority over the staff, but I think we have a right to be treated and written of as innocent men until we are found to be guilty.

As the new rules are still *sub judicibus*, I will say nothing about them, but must thank you for your excellent critique, which is admitted by all parties to be exceedingly fair. Apologising for troubling you with these personal matters,

I am, Sirs, yours truly,

DAVID SMART, L.R.C.P. Lond., M.R.C.S., F.R.A.S.,
Surgeon, late House Surgeon to the Surrey Dispensary.

P.S.—I have seen Dr. Hooper's letter on the above subject and can heartily concur in his statements.

May 5th, 1894.

To the Editors of THE LANCET.

SIRS,—The letter of my old friend and colleague, Dr. Hooper, in THE LANCET of May 5th, is, I think, a strong confirmation of the statements made in my letter on the above subject in your issue of the 28th ult., although it is only just to him to state that he is by no means the worst of those who most deserve the rod. The arrangement whereby the managing committee some years ago, as he alleges, relieved the medical staff of their most important and responsible duties would be a breach of faith towards the subscribers to the charity, who by the rules are distinctly led to believe that the patients recommended by them shall obtain the advantages of the skill and experience of the physicians and surgeons themselves, especially in serious and dangerous cases. That in this, however, they are entirely deceived is not only fully proved by the figures in the official return of visits given in my previous letter, but now equally confirmed by "the oldest member of the staff," and it is indeed sad to find a gentleman of his age and standing defending or palliating such a state of things. His suggestion that the work of the dispensary has enormously increased since 1856, will scarcely bear close examination; the daily average number of patients in attendance is probably but little changed, and the apparent yearly increase, as shown in the annual reports, is largely due—from 20 to 25 per cent. at least—to the counting the same patient as a new case if not discharged within a month. The last published report of the Surrey Dispensary, that for 1892, gives the total number of patients for the year—including 340 midwifery cases—as 14,424, the number of home visits paid as 2650, and the number of the staff as 6—three physicians and three surgeons. In the case of the Finsbury Dispensary the report for last year shows that the respective numbers were 13,288, 4363, and 2—one physician and one surgeon only, and who by their rules are themselves bound to visit their home patients. In other and simpler terms, at the Finsbury, with one-third of the staff, the annual total of patients was only about 8 per cent. *less*, whilst the home visits were about 60 per cent. *more*, than at the Surrey.

In order to fully appreciate the present state of things at the Surrey Dispensary, one must imagine that at a large general hospital—take Guy's for instance—the out-patients are under the well-paid care of the physicians and surgeons, the in-patients, including all dangerous obstetrical cases, are relegated to the irresponsible care of the house physicians and house surgeons, and last, but not least, that the governors have no proper authority over the said physicians and surgeons. Finally, my friend, Dr. Hooper, disputes my knowledge and my status in this matter; but he forgets that the house surgeon has the best opportunities of judging the regularity of attendance and the popularity of the members of the staff, and that, as a life director, all the committees of the Surrey Dispensary are open to me.

I am, Sirs, yours truly,

JOHN INCE, M.D.,
Retired Surgeon H.M.'s Indian Army; Retired Surgeon and Life Director of the Surrey Dispensary.

Swanley, Kent, May 8th, 1894.

"SYMMETRICAL CANCER."

To the Editors of THE LANCET.

SIRS,—A great deal of interest attaches to Dr. Sumpter's case of epithelioma of both auricles, although it is not unique, for Mandry reported a similar instance not long ago. A considerable number of examples of the symmetrical development of cancer in various parts of the body have now been recorded. In a recent publication Michael cites two instances of the symmetrical outbreak of the disease on the extremities. Cases of the simultaneous outbreak of cancer in both breasts have been recorded by Billroth, Aitken, Klotz, Volkmann, and others, and Billroth has reported an instance of symmetrical mammary sarcoma. A similar state of things has occasionally been met with in other paired organs, such as the testes and ovaries. These facts, especially when considered in connexion with the numerous cases of multiple primary cancer lately reported, seem to me to indicate that the conditions which determine the disease come from *within* rather than from without, as it is just now the fashion to believe.

I am, Sirs, yours truly,

Preston, May 10th, 1894. W. ROGER WILLIAMS.

"EXTRA-PERITONEAL VESICAL HERNIA."

To the Editors of THE LANCET.

SIRS,—I have seen with great interest Mr. Lane's communication on extra-peritoneal vesical hernia which appeared in a clinical note in THE LANCET of May 12th. If I read Mr. Lane's paper correctly, he found a hernial sac and attached to its back an extra-peritoneal protrusion of the bladder. This would introduce a new variety of vesical hernia—the third one—and would be quite unique. At least I have not been able to discover an exactly similar case in the literature of the subject. The salient point, however, in my case is the total absence of a hernial sac, and I was referring to this class of cases when I said that only five of them had been recorded. Perhaps it would be better to distinguish these cases by the name of prolapse, or descent of the bladder through the

inguinal ring, as suggested in my paper. These are the cases which offer the greatest difficulty to the operating surgeon. In the intra-peritoneal variety, and also in Mr. Lane's case, a sac is found and an obscure structure discovered behind it; suspicion will naturally arrive with regard to its character, and some surgeons have succeeded in identifying the bladder without opening it. But we meet with a totally different state of things in those cases of which I have brought forward an instance. Here the surgeon cuts down through the different layers with the intention of exposing a supposed hernial sac; at last he reaches what appears to be the sac, but what in reality is the bladder; it is opened and the mistake recognised either at once or, more frequently, some time afterwards. I confess I do not see how in these cases injury to the bladder can be avoided; at all events, the six surgeons who hitherto have been unfortunate enough to meet with such cases were unable to avoid it.

I am, Sirs, yours truly,

West-street, Finsbury-circus, May 14th, 1894. ERNST MICHELS.

"EMPYEMA IN CHILDHOOD."

To the Editors of THE LANCET.

SIRS,—I have read Dr. Sturges' letter with reference to my paper in THE LANCET of May 5th with much interest. As regards his statement: "In almost all cases, as I now believe, resection is needed," coming from so eminent an authority, it must carry much weight. After carefully going through the old notes and records and observing the practice at the Children's Infirmary, Liverpool, at the same time taking into consideration the grave importance of the subject, and though I may be living in one of Dr. Sturges' "stages of belief," I have come to the conclusions mentioned in my paper. My object in writing was not, however, so much to dogmatise on the treatment as to publish the results during ten years at a large children's hospital, with an analysis of the fatal cases. With reference to the high mortality of children under three years of age I venture to state that, whatever form of treatment is adopted, the death-rate will remain a very high one. Though I have not recently seen any records of duration of illness, I take it that an average duration of 8·8 weeks, taken from seventy-seven cases, is not by any means prolonged. The words "major operation" were used in a comparative and not superlative sense. With regard to the question of treatment of the twenty-nine fatal cases, I hope to have a further short communication to make, but would now point out that in fourteen there was, besides the condition of empyema, either pericarditis or peritonitis to deal with, and in two the children came into hospital too late, with the lung riddled with sinuses, secondary to rupture of an empyema.—I am, Sirs, yours obediently,

Rawdon, Yorks, May 12th, 1894. J. P. WIGHTMAN.

AN ETHICAL QUESTION.

To the Editors of THE LANCET.

SIRS,—In a recent monthly magazine I observed an article on "Modern Surgery" by a London surgeon. Let me put before you a parallel case. I, your humble correspondent, a medical man, court public favour by having my name, my address, and my qualifications (ability) made known in a local newspaper in my own neighbourhood, and in this simple and direct way only, I advertise myself in my own neighbourhood. Your space I know is valuable, but I do want you to tell me and your readers in what sense my conduct in thus advertising can be thought by my *confrères* unprofessional or dishonourable, when, so far as I can see, the other larger and more glaring way of advertising is held to be irreproachable?

I am, Sirs, yours faithfully,

Truro, May 11th, 1894. WM. DALE, M.D. Lond.

SCARLET FEVER (?)

To the Editors of THE LANCET.

SIRS,—It would be interesting to know what those cases proved to be which are mentioned in the report of the public health[1] as having been sent into hospital as scarlet fever, diphtheria, or enteric fever, but after sojourn were differently diagnosed. It is evident that if these cases occurred in considerable numbers, as stated, there must be some prevailing cause, probably epidemic, for symptoms of a kind so like those of scarlet fever as to lead to notification and removal. Having had personal experience during the last few weeks of cases extremely like scarlet fever, but differing in some important respects from that disease, may I ask you to assist in clearing up this question, or at least to consider whether or not the subject deserves fuller inquiry?

I am, Sirs, yours faithfully,

May 8th, 1894. R. L.

[1] The Times, April 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Queen and the Manchester Ship Canal.

IT appears definitely settled that Her Majesty the Queen will not make a personal voyage along the Ship Canal.

Whitsuntide School Processions.

It has long been the custom here for the Sunday-school children to walk in procession through the streets on Whit Monday. The Roman Catholic schools have a procession of their own on the Friday. On some other day excursions are made to places more or less distant, sometimes so far away that many hours are spent in the train and the children reach home at night worn out with fatigue. The march through the streets, though at first no doubt enjoyed, becomes a weary drag, more especially to the smaller ones. In rough, wet weather these poor children, often lightly and flimsily clad, suffer considerably, and it is not pleasant to contemplate the permanent injury to many of them as the result of these Whitsuntide festivities. A lively correspondence has been going on in the papers on the subject, some writers objecting—and not without fair grounds—to the complete interruption of the ordinary traffic, so that a person may not be able to get from one part of the town to another for an hour or two. Numbers of people lose their trains and their tempers, while the benefit to the schools and the community is very doubtful. Without doing away with the march altogether, its length might be curtailed with advantage to the children and less inconvenience to the public, and school managers will, it is to be hoped, display more wisdom and more thought, so as not to overtax the powers of weakly children not accustomed to long-continued exertion.

The Society of Fellows of the Royal College of Surgeons of England.

It was resolved at a meeting of the Central Executive Council of this society, held in London on April 18th, that the Fellows resident in Manchester and district should be invited to form a branch Executive Council. In accordance with this invitation a meeting of the local Fellows was held on Thursday, when the following resolution, moved by Mr. F. A. Southam and seconded by Mr. A. H. Young, was carried unanimously:—"That a Branch Executive Council in connection with the Society of Fellows of the Royal College of Surgeons of England be formed in Manchester." The following Fellows were then elected:—Mr. James Hardie (chairman), Mr. F. Jones, Mr. H. W. Pomfret (hon. secretary), Mr. C. Richmond, Mr. F. A. Southam, Mr. W. Thorburn, Mr. G. A. Wright, and Mr. A. H. Young.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

A Hospital in Dock.

THE Tyne Port Sanitary Hospital, which has been moored at Jarrow Slake since it was built in 1886, has been docked on the pontoon belonging to Smith's Dock Company, North Shields, for painting and overhauling. This floating hospital was built so that the underwater portion could be taken out in sections and repaired, as at the time of its construction there was no dock in the country wide enough to take in the hospital, which is not less than 80 ft. wide. The one-sided pontoon dock at North Shields has, however, got over this difficulty. It only took thirteen minutes to lift the hospital on the dock.

Sanitary State of Yorkshire Villages.

The state of some of the villages in North Yorkshire

and Teesdale is at present being made the subject of special inquiry by the Local Government Board and the County Council. At Northallerton Dr. Hutchinson, the medical officer of health, stated that he believed the drains there were generally started on common brick, and said that he had noticed when he inspected them that the ground near was saturated with sewage matter. Romanby Beck was practically the Northallerton sewer. The sewers were ventilated by open grates, and he had known people made sick by the smell from them. Last year he and his assistant visited about thirty cases of typhoid fever in Northallerton.

Diphtheria in Mickleton.

On Feb. 22nd Mr. Atkinson, of the Teesdale Union, reported a serious outbreak of diphtheria in the village of Mickleton. During the space of a fortnight eighteen cases were discovered, of which up to the date of his report three were fatal. In his report to the council (May 18th, 1892) upon the pollution of the Tees occurs the following description of Mickleton and its sewage disposal arrangements:—"Mickleton has a population of 685, and 156 houses. Dr. Taylor in his first report describes Mickleton as being practically undrained, a filthy and neglected village." At his visit he found about 700 yards away from the village two settling tanks, each of the following dimensions—18 ft. by 6 ft. and 4 ft., and each having a screen across the middle. From these tanks a main sewer is carried up to and about three-quarters the length of the village, where it stops. The overflow from the tanks runs thirty yards and then joins a runner, the contents of which, after a course of 400 yards, are discharged into the Tees.

Ambulance Work in the North.

At a meeting of the Stockton Police Ambulance Class, held last week for the presentation of certificates, it was stated that nearly 80 per cent. of the whole of the Durham County Constabulary had received ambulance certificates. The Durham Constabulary was one of the very first constabularies to take up the work when the association was first formed. The late Colonel Duncan, who took a great interest in ambulance work, came to Durham and lectured there at the commencement of the association, and the late Colonel White used his efforts in forming a class—that was in 1879 or 1880—and ambulance work in the division had gone on ever since. The Durham Constabulary had now a larger proportion of ambulance members than any other constabulary in the kingdom. Presentations were made to Mr. Douthwaite, the instructor of the class, and also to Mr. Alexander at Whitley.

Epidemic of Measles at Longton, Carlisle.

The medical officer of health stated that the master of Shawfoot School had applied to him for power to close the school on account of a serious outbreak of measles in the neighbourhood, 80 per cent. of the children being directly or indirectly affected by it. The school had been closed since April 30th.

Newcastle-on-Tyne, May 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Sir Joseph Lister in Glasgow.

SIR JOSEPH LISTER addressed the Glasgow students at the University Union on Thursday evening, and to-day (Friday) will be present at a reception given to him at the house of Dr. Hector Cameron to meet his old friends and pupils. I am certain that these will be large in number and enthusiastic in their attitude to their former Regius Professor of Surgery.

The Spread of Small-pox.

Small-pox tends to increase again in Scotland. In addition to its prevalence in Leith, Edinburgh has now 32 cases in hospital and 41 persons isolated. At Coatbridge, in Lanarkshire, 2 cases are reported, and in Glasgow during the week ending Monday last there were 5 new cases. In the previous week there had been no notifications, and in the week before there were 8. At Belvidere Hospital 26 cases are under treatment.

Presentation to a Medical Man.

A number of friends, many of whom were also patients, assembled at the North British Station Hotel on May 9th last to present Dr. Miller of St. Rollox with a testimonial. This took the shape of an illuminated address and a purse of 110 sovereigns.

A Case of Longevity.

A case of longevity is reported from Fifeshire. A woman has just died near Balmerino at the age of 102.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Jervis-street Hospital, Dublin.

AN Oriental *fête* under the name of "Araby" will take place this week at Ball's Bridge Buildings in aid of this hospital. The institution has had nearly 200 years of existence. It commenced in Cook-street in a very humble way, having been founded by six Dublin physicians. It was soon, however, transferred to other premises, and about 100 years ago was removed to its present position in Jervis-street. Within the last few years the hospital has been re-erected at a cost of £55,000, and at the present time a debt of nearly £14,000 still remains due, but the management trust that the greater portion of this sum will be obtained by means of the "Araby" *fête*.

Richmond Lunatic Asylum; Nurses Dismissed for Cruelty.

At a meeting of the governors last week the acting medical superintendent reported that Dr. G. P. O'Farrell, inspector of lunatic asylums, had held an inquiry into the allegations of cruelty against two nurses to a patient named Josephine Dowling. The latter was found suffering from injuries to the chest and a black eye, and she stated that they were inflicted on her by one of the nurses, who, she stated, struck her with a bunch of keys. Extensive bruises were also found on her legs, caused, as alleged, by the other nurse, who had beaten her with a boot. Both nurses swore that they never struck the patient nor ill-treated her in any way, and that the injuries were self-inflicted. The black eye and injuries to the legs were first detected by the assistant medical officer—a fact which speaks badly for the supervision exercised over her patients by the charge nurse. The Board dismissed the two nurses and retired the charge nurse (who had a service of thirty-five years) on a pension.

Health of Ireland: March Quarter.

During the March quarter there were registered in the 802 registrars' districts in Ireland 27,859 births, a number equal to 24·3, and 26,765 deaths, representing an annual rate of 23·3. The birth-rate for the quarter was 0·4 above the average rate for the corresponding quarter of the past ten years, and 0·7 over the rate for the March quarter of 1893. The deaths were above those registered in the corresponding quarter of 1893 to the extent of 3984. The increase in the mortality during last quarter as compared with the average for the corresponding quarter of the past ten years is equivalent to an excess of 6 per cent., and was due to the rather general prevalence of influenza and its pulmonary complications, and to severe outbreaks of some of the principal zymotic diseases in a few localities. As regards the latter, special reference may be made to the mortality from measles and whooping-cough in Belfast, and that from the former disease in the Union of Ballymena, and from the latter in the Dublin registration district. Enteric fever showed a marked tendency to decline in Dublin, but there was no appreciable diminution of the deaths from the disease in Belfast as compared with the mortality for the preceding quarter, and in proportion to population it caused a large number of deaths in Castleisland district, Tralee Union. The total number of deaths from the principal zymotic diseases was 1566, or 1·4 per 1000 living, being 0·1 over the rate for the previous quarter. Measles caused 417 deaths; scarlet fever, 147; typhus fever, 56; whooping-cough, 392, or 28 in excess of the average for the corresponding quarter of the last five years; diphtheria, 123; and enteric fever, 185. Compared with those for the corresponding quarter of 1893 the returns of pauperism show an increase of 1165, or 2·6 per cent. in the average number of workhouse inmates on Saturdays during the quarter, and a decrease of 3 in the average number of persons on out-door relief.

Death of Dr. J. M. Callan.

This gentleman, who was the coroner for North Louth and

medical officer for the Dromiskin Dispensary, died last week under very distressing circumstances. While reading on Sunday night the bed took fire, in some way unexplained, and the unfortunate gentleman was found on the floor, suffering from severe burns, having thrown himself from the bed. On examination it was found that he had sustained serious burns on the throat, chest, and abdomen; and he died on Tuesday evening. The deceased had held the post of coroner for North Louth for about thirty-five years. He was a widower, and aged about sixty-five years.

Health of Belfast.

The report of Dr. Whitaker, medical superintendent officer of health of Belfast, for the year 1893 has just been issued. In this I find that deaths from all causes, as also those from chest affections, were fewer than in the preceding year, and the increase in the number of those dying from zymotic diseases is due to the increased fatality from diarrhœa. The death-rate from zymotic diseases is higher than that of most of the other cities in the kingdom. The city of Belfast continues to enlarge, and Dr. Whitaker frames his return of the birth and death rate on the basis that the population for 1893 was 275,000. Of the 6848 deaths registered during the year 2580 were attributed to phthisis and diseases of the respiratory organs, and in Belfast deaths from phthisis are fewer than in either Dublin or Cork. Of the zymotic diseases the heaviest mortality is from diarrhœa, the next is measles, then come whooping-cough and typhus fever, from which during 1893 there was a greater mortality than in the previous year. Dr. Whitaker calls attention to the fact that there is not enough hospital accommodation in Belfast, and he regrets that a hospital for infectious diseases has not yet been built. There is one matter of the greatest importance to which the medical officer of health refers in his report, and that is that his information as to the health of the city is limited. He should surely be able to know where disease exists and where death occurs; but neither of these points does he know, except so far as the districts (each of which contains from 15,000 to 50,000 people) in which either happens. Until the city adopts the Compulsory Notification of Diseases Act it is utterly useless to think that disease can be properly dealt with.

Irish Medical Schools' and Graduates' Association.

At a meeting of the Council on the 16th inst. Sir Thomas Crawford, K.C.B., late Director-General of the Army Medical Department, was unanimously elected Chairman of Council for the usual period of three years.

May 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Lead Poisoning with Monosulphite of Sodium.

M PÉROU[1] tells us that the administration of 40 centigrammes a day of monosulphite of sodium gives rapid relief in lead colic. He states that the elimination of the metal is much hastened by this treatment, and that the sulphite is an efficient prophylactic agent. The employment of the drug is, he says, devoid of danger.

Morphinomania cured in Twenty-five Days.

M. Comby[2] reports the case of a young woman aged twenty-two years, who since an attack of pelvic peritonitis that occurred in February, 1891, had contracted the habit of injecting subcutaneously 25 centigrammes (about 4 grains) of hydrochlorate of morphine per diem in twenty doses. When admitted on April 5th of this year into the Tenon Hospital she had reached an extreme degree of cachexia, and she was covered with abscesses and the scars of such due to the use of the hypodermic needle. From the first day the daily dose of the drug was reduced from 50 to 6 centigrammes, given in three doses. She was given at the same time a mixture containing 10 centigrammes of spartein sulphate, 50 centigrammes of caffeine, and 50 centigrammes of sodium benzoate, the whole to be taken in twenty-four hours. This daily dose was continued up to May 1st, when the morphine was totally discontinued. At this date the condition of the patient had undergone a complete transformation, and the improvement has continued up to the present. M. Comby considers the patient to be cured.

[1] Soc. de Biologie, May 5th.
[2] Soc. Méd. des Hôpitaux, May 11th.

The Danger of Bromide of Ethyl Inhalations.

Dr. Suarez de Mendoza[3] reports a case of death from the administration of ethyl bromide as an anæsthetic. The patient, a woman, succumbed at the sixth inspiration. The compress held over her face had been sprinkled with about eight grammes (two drachms) of the anæsthetic. In this connexion Professor Terrier[4] remarks that the ethyl bromide supplied to the hospitals by the Assistance Publique is an impure product, containing in it dry phosphuretted hydrogen, recognised by the peculiar alliaceous odour of the patient's breath. The presence of this impurity is explained by the mode of preparation—phosphorus, bromine, and alcohol, the two former being generally impure. M. Terrier advocates another mode of preparing the bromide—viz., by the interaction of potassium bromide, alcohol, and sulphuric acid. The ethyl bromide evolved is in reality a fairly pure mixture of ethylic and hydrobromic ethers. M. Terrier would have all hospital patients anæsthetised out of the operating theatre by an anæsthetist duly appointed, as in England, and not by a raw student, as in France. English visitors to Paris hospitals must, indeed, be struck with the summary way in which the anæsthetising of a patient is entrusted to an inexperienced youth, whose only apparatus is a fold of rag held over the patient's mouth and nostrils.

The late Professor Pouchet's Successor.

It was at one time a question of the suppression of the chair of Comparative Anatomy held until lately by the regretted *savant*, Professor Pouchet. The professors of the Museum of Natural History, assembled in congress to discuss the matter, have pronounced in favour of the retention of the chair. Four candidates for the vacancy—two proposed by the Academy of Sciences and two by the Museum—are in the field. The candidate supported by the Museum and by Professor Milne Edwards is Dr. Filhol, a deservedly esteemed anatomist.

A Tramcar Ambulance Service.

A capital idea occurred to Baron Berge—viz., to utilise the tram lines of Lyons for the conveyance of sick soldiers from the barracks to the military hospital. At 9 P.M., when the ordinary traffic is greatly diminished, the sick are placed in the tram ambulance, the serious cases being installed in hammocks and driven on the smooth rails to the hospital under the escort of a hospital orderly, who replaces the squad who performed the duty under the old *régime*.

May 15th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Judgment involving the Rights (?) of Gold Cure Institutes.

THE much-vaunted so-called "method" known as "Gold Cure" has caused the establishing of institutions wherein patients may receive this specific treatment; occasionally registered practitioners carry on these places, but others are conducted by unqualified persons. An action has been taken by the College of Physicians and Surgeons, Quebec, against Father Murphy, he having opened and conducted "Father Murphy's Gold Cure Institute" for the treatment of inebriates from April, 1893, to September of the same year. The reverend priest claimed in defence that the institution was always under the control of a duly licensed physician. The court held that the proof went to show that the physician made only one visit and gave a single injection to the patients each day, the other injections being attended to by the defendant himself or his *employés*, notwithstanding the prohibition of the physician, and that the defendant practised medicine to the extent of giving them remedies and injections. For these reasons the defendant was held to have acted in violation of the law and was fined 50 dollars, and, in default of paying the same within thirty days, to be imprisoned for sixty days.

Action for Malpractice.

A case of some interest was tried at the assizes last month at Kingston, a medical practitioner of Brookville, Ont., being defendant. The plaintiff set up that she went to the practitioner on Dec. 24th, 1891, and was under treatment for several weeks for a birth-mark upon the face. In place of it disappearing a keloid growth appeared, adding greatly to her

[3] Acad. de Méd., May 8th.
[4] Soc. de Chirurgie, May 9th.

disfigurement. Later, the plaintiff again visited the practitioner, but the birth-mark and growth were still on the face. The practitioner claimed that he removed the nævoid growth, but denied having promised to leave the plaintiff's face in no worse condition than when treatment began. A verdict by consent was given for 500 dols.

Tuberculosis in Ontario.

A most interesting and important pamphlet has just been issued by the Provincial Board of Health, being a report on tuberculosis in this province, prepared by Dr. P. H. Bryce, secretary of the Board. The death-rate per 1000 of population for the year 1892 was 10·7, while from tuberculosis alone it was 1·2 per 1000. Of the 11,008 cases entering the hospitals of the province 6 per cent. suffered from some form of the disease, 23·4 per cent. of the deaths in the provincial asylums for the insane being from the same cause. The report dwells at some length with, and enters into details of, the experiments with tuberculin upon the cattle at the Ontario Agricultural College, and the post-mortem appearances found in twenty-eight of the animals, tuberculous deposit being found in the lungs in 64 per cent., in the bronchial and mediastinal glands in 85 per cent., in the mesentery and intestines in 7 per cent., in the liver in 42 per cent., and in the udder in 7 per cent. of the cases. Considering the importance of the trade, some fifty million dollars being invested in cattle in Ontario alone, the report urges a systematic inspection throughout the province and, as a safeguard to human life, compulsory notification, proper inspection, isolation, and the establishing of homes for patients suffering from phthisis.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Alleged Dissemination of Disease by Sewer Ventilation.

THE Sydney Water and Sewerage Board recently commissioned Mr. J. M'Garvie Smith to investigate the bacteriological condition of the sewers under its control. He has just prepared a report on the subject, in which he states that the air in the sewers is heavily charged with micro-organisms and that cultures made from various samples of air taken from the tops of exit ventilating shafts demonstrate the fact that these micro-organisms are carried out into the atmosphere. He does not appear to have isolated any definite pathogenic organisms, but he observes that the sewers are the inevitable receptacles of the germs of any disease prevalent in the city, and that the average temperature of the sewers and the accretion of organic matter in their sides and crowns present ideal conditions for the culture of bacteria. He contends that the foul odours of sewers are the product of bacterial action and ought to be regarded as a warning evidence of the presence of germs. Instead of dispersing these products through the atmosphere, as is done by the present systems of sewer ventilation, the germs which produce them should be destroyed. To obviate the present evils Mr. Smith recommends more frequent flushing of the sewers, closing of the present exhaust shafts, and sterilisation of the sewer air by discharging it through reverbatory furnaces. Mr. Smail, the engineer to the Board, has furnished a report in reply to Mr. Smith, in which he urges that more information be obtained before carrying out the proposed alterations, which would in themselves lead to other dangers, while the risk of infection from dissemination of pathogenic organisms by the present system is very slight owing to the attenuation they would undergo when greatly diluted, deprived of a suitable culture medium, and exposed to sunlight and the action of other organisms.

Increase of Typhoid Fever in Victoria and in Sydney.

For the last two years or more the people of Victoria have been congratulating themselves that the vigorous efforts made by the Board of Public Health to improve the sanitary condition of the colony had resulted in a marked diminution of typhoid fever; since the beginning of this year, however, this colonial scourge has begun to assume its old virulence. Thus the returns for the first fortnight of January, 1894, show 142 cases, while only 78 cases were reported for the same period in 1893; and the returns for the period Feb. 17th to 24th show 148 cases as against 58 in the same period for 1893. This disease is also said to be unduly prevalent in the suburbs of Sydney, but, notification of infectious disease not being compulsory in New South Wales, no figures can be given. It is significant that the cases appear to be chiefly in districts outside the control of the Sydney Water and Sewerage Board, and pollution of the water-supply is regarded as the probable cause of the outbreak. In Victoria the water-supply is notoriously liable to pollution.

Personating a Medical Man.

Two men named Bennett and Smith were recently sentenced at Sydney to four and two and a half years' imprisonment, with hard labour, respectively, for conspiring to defraud. Bennett was a dentist and treated a patient named Gray for some affection of the throat. Not being satisfied, Mr. Gray, who lived at Wagga, came to Sydney to consult a specialist. Bennett accompanied him and professed to have made arrangements with a specialist to see Mr. Gray. He then introduced Smith as the specialist in question. Smith examined the throat and said that Bennett's treatment was quite right and nothing more could be done. He took his fee and departed, but was followed by Mr. Gray, who discovered that he was not the specialist whose name had been assumed and was not even a qualified practitioner.

Actions for Slander by Medical Men.

The case W. S. Dobbin, M.B., *versus* J. R. Hutton, M.B., and the cross action Hutton *v.* Dobbin were heard at Castlemaine and decided in favour of Dr. Hutton. Each surgeon accused the other of incompetence in treating a case of retention of urine under their joint care in the hospital, where Dr. Dobbin was honorary surgeon and Dr. Hutton resident medical officer. The judge said he had never seen such a trivial case so elaborated, and that it should never have been brought to court.

Electoral Reform at the Melbourne Hospital.

A special meeting of the governors and subscribers was held on March 8th at the Melbourne Hospital to consider the alterations in the bylaws relating to the election of the staff previously agreed to by the committee, as recorded in THE LANCET.[1] After considerable discussion the proposals were lost by overwhelming majorities, with the result that the old system of election remains unaltered.

Fatal Mercurial Poisoning from a Vaginal Douche.

The committee of the Women's Hospital, Melbourne, recently held an inquiry into the death of a patient which occurred a short time after her confinement in that institution. From the evidence of the pathologist and the staff it appeared that death was caused by mercurial poisoning and was subsequent to the administration by a nurse of a vaginal douche of perchloride of mercury. The staff exonerated the nurse from blame.

Hydatid of the Femur: a Cause of Fracture and Delayed Union.

Mr. R. A. Stirling recently read the notes of a case under his care in the Melbourne Hospital which presented some unusual features. A youth aged twenty-one slipped on a paved yard on March 31st, 1893, and fractured his right thigh. The limb was put up on a splint in the usual way and in six weeks appeared to have united, but on examination on July 12th showed non-union, but great thickening of the shaft. A cardboard and dextrine splint was then applied and the patient sent to a convalescent home. On Dec. 21st he was readmitted to hospital with an abscess at the lower and inner part of the right thigh. When this was opened it was found to contain hydatid cysts and to communicate with the shaft of the femur, which was a mere shell, filled with an immense number of hydatid daughter cysts. The parent cyst had no adventitia. Union had occurred at the posterior part of the bone.

Multiple Hydatids of the Liver.

Mr. Stirling also read notes of a case in which he had operated by Lindemann's method on five separate and distinct hydatid cysts in the liver of a girl aged eleven, who recovered perfectly. When first discovered it is noteworthy that one of the cysts was not suppurating, while all the others were.

Recent Medical Works by Australians.

The late Dr. Davies Thomas of Adelaide, whose researches in hydatid disease are well known, unfortunately died before he was able to complete the preparation of his work for the press. His friend, Dr. A. A. Lendon, has collected his manuscripts and papers and edited them, and, though the

[1] THE LANCET, Jan. 20th, 1894.

result is not quite so satisfactory, perhaps, as if Dr. Thomas had done it himself, the work forms, with his previously published book, a very complete account of hydatid disease in all its aspects and indeed is the most authoritative modern work on the subject. Mr. P. E. Muskett of Sydney, in his "Art of Living in Australia," just published, charges the Australians with not recognising the semitropical climate in which they live, and with not adapting themselves to their environment, two facts which Dr. Murray Gibbes has also pointed out in the columns of THE LANCET.[2] His work is of a high order of literary merit and contains much common-sense advice, written in a very pleasant style. He accuses the Australians of eating too much meat, drinking too much tea, and of neglecting their own wines; while they take no trouble to develop deep-sea fishery or the culture of oysters and vegetables. Dr. M. J. O'Sullivan of Melbourne has just issued a forcibly written *brochure* on "The Proclivity of Civilised Woman to Uterine Displacements." His inquiries among the Australian aborigines show that their women enjoy a most striking immunity from displacements of the pelvic organs, notwithstanding the fact that they do not observe the recumbent posture for any time after confinement. He attributes these affections, as well as uterine cancer and fibro-myoma, very largely to the feverish, artificial life of modern civilised woman, especially if a woman of fashion, and thinks a more natural life, and especially a more rational dress, would prevent many of the ills to which woman is prone. In the treatment of displacement he objects strongly to the routine use of pessaries and is a warm advocate of the Alexander-Adams' operation as modified by Edebohls.

Obituary.

WILLIAM J. H. LUSH, M.D. BRUX., F.R.C.P. EDIN., M.R.C.S. ENG.

WILLIAM J. H. LUSH, notice of whose death will be received with great regret by all his friends, died at Eastbourne on the 28th ult. after a few days' illness at the early age of forty-three years. He was born at Damerham, Wilts, and on completing his education at King's College school he became a student at King's College Hospital, where he obtained the Warneford Scholarship and other distinctions. He was for a time resident medical officer to St. George's Dispensary, Hanover-square, and afterwards settled in practice at Fyfield, near Andover, where he remained till the autumn of last year, when failing health induced him to give up the duties of a large country practice and seek less laborious work at Eastbourne, where he continued to practise till within a few days of his death. Universal and sincere regret was expressed on all sides in his old neighbourhood when the sad news was known; his bright and genial manner during his long residence there made him much appreciated and sought after, not only by his village patients, but by others whom his kindness and attention afterwards made firm friends. He unselfishly studied the comfort and welfare of his poorer patients, by whom he was regarded with the greatest esteem, and as a proof of his devotion to his professional duties it may be mentioned that a few years since, whilst on his rounds, he accidentally fractured his arm. On his way home he was met by a messenger desiring his attendance on a poor woman in labour. Regardless of his own sufferings he immediately attended to the message, and it was some hours before he was able to have his own injuries attended to. Personally he was much respected, and his early death will be greatly felt by a large circle of grateful patients and sorrowing friends.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 10th inst., the President, Mr. J. W. Hulke, F.R.S., in the chair.

Mr. Chauncy Puzey was introduced and admitted a Fellow of the College.

Mr. J. McCarthy was re-elected and readmitted as a member of the Court of Examiners.

The President reported that, in pursuance of the provisions of the Bradshaw bequest, he had chosen Mr. Arthur Edward Durham as the Bradshaw lecturer for the ensuing collegiate year.

The annual meeting of Fellows of the College for the election of members of the Council was appointed to be held on Thursday, July 5th next, at 1.30 P.M.

A meeting of the Fellows of the College under Section 23 of the Regulations of the Council was appointed for the same day at 5 P.M. The subjects to be referred to the consideration of the meeting will be stated in the notice.

The President stated that he had received a letter from Earl Cadogan reporting that the consulting medical and surgical staff of the Chelsea Hospital for Women had declined to join the proposed committee of inquiry into the charges made against the hospital, and that he had consequently nominated Mr. H. G. Howse to serve on the committee as the representative of the College.

A letter was read from Mr. Frederick Treves resigning his appointment of Member of the Court of Examiners, such resignation to take effect on the completion of the next Final Examination for the Fellowship. The resignation was accepted. The vacancy thus occasioned will be filled at the ordinary meeting of the Council in June

A letter was read from the Sanitary Institute asking that two delegates might be appointed to attend the autumn congress and exhibition of the institute, to be held at Liverpool in September. It was suggested that the Examiners in Public Health should act as delegates.

It was agreed, on the motion of Mr. Hutchinson, that the Congress of the Dermatological Society of Great Britain and Ireland be invited to visit the museum and inspect the collection of casts and drawings illustrating diseases of the skin.

The following arrangements have been made for the final Fellowship Examination: Monday, May 21st, Written Examination, 1.30 P.M.; Tuesday, 22nd, Clinical Examination, 2.30 P.M.; Wednesday, 23rd, Operations, 1.30 P.M.; Thursday, 24th, Surgical Anatomy, 2 P.M.; Friday, 25th, and Saturday, 26th, Pathology, 5 P.M. The examinations from Monday to Thursday inclusive will be conducted at the Examination Hall, and on Friday and Saturday at the College. On account of the large number of candidates (61) the Pathology examination will extend over two days.

The death on the 15th inst. is announced of Mr. Thomas Madden Stone, who was for many years an official at the Royal College of Surgeons of England. Entering the service of the College in 1832 as assistant librarian, he served in that post, and later as clerk in the office, for more than fifty years, retiring in 1882. Owing to the lengthened period during which he was connected with the institution, he was well known to more than one generation of practitioners. Mr. Stone occasionally contributed items of news and other matter interesting to the profession to the columns of THE LANCET.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology at meetings of the Board of Examiners as follows:—

Monday, the 14th inst.:—

Charles George Spencer, M.R.C.S. Eng., L.R.C.S. Lond., of University College, London; Arthur Hugh Lister, of Aberdeen and Cambridge Universities and King's College, London; and Frederick Craven Moore, of Owens College, Manchester.

Seventeen candidates were referred back to their professional studies for six months.

Tuesday, the 15th inst.:—

Arthur Heath and John Arthur Oswald Briggs, of St. Bartholomew's Hospital; Henry Harold Greenwood, of Yorkshire College, Leeds; Edward Archibald Smith, of Yorkshire College, Leeds, and University College, Liverpool; George Gibson Hamilton, M.B. Edin., of University College, Liverpool, and Edinburgh University; Charles Planck, M.R.C.S. Eng., L.R.C.P. Lond., of St. Thomas's Hospital; Gabriel William Stahel Farmer, M.R.C.S. Eng., L.R.C.P. Lond., of Oxford University and London Hospital; Thomas George Stevens, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond, of Guy's Hospital; and Harold Dickinson Senior, M.R.C.S. Eng., L.R.C.P. Lond., of Charing-cross Hospital and Durham University.

Eleven candidates were referred back to their professional studies for six months.

[2] THE LANCET, Feb. 3rd, 1894.

Wednesday, the 16th inst. :—

Arthur Shillitoe, M.R.C.S. Eng., L.R.C.P. Lond., of Cambridge University and Guy's Hospital; Arthur Henry Leete, M.R.C.S. Eng., L.R.C.P. Lond., of Guy's Hospital; William West Lenington, M.R.C.S. Eng., L.R.C.P. Lond., of St. Mary's Hospital; James Hussey and Alexander Benjamin Tucker, of St. Bartholomew's Hospital.

Eleven candidates were referred back to their professional studies for six months.

DURHAM UNIVERSITY.—At a convocation of the University of Durham, held on Saturday last, the degree of Doctor of Medicine was conferred upon the following gentlemen :—

Frederick Heales Carter, Howard Bewley Carter, George Richard Chadwick, Edward Twyford Chamberlain, William George Kemp, Lewis Lewis, Daniel McChere Ross (practitioners), and Charles Averill, Duncan James Caddy, Harold Cecil Halstead, Edgar Mitchell, Isaac Gibson Modlin, Henry Smith, Edward Scott Sugden, Louis George Charles Vintris, Algernon Edward Lake Wear, and Edward Cecil Willcox.

The degree of Bachelor of Medicine was conferred upon :

Thomas Cook Barkas, Edward Bromley, Lionel Claude Everard Calthorp, Thomas Morrison Clayton, William Forrest, Ferdinand Henry Hake-Francis, Robert James Hughes, Frank Silva Jones, Robert Cecil Leanard, Edward Augustus Lermitte, Walter Frederick Miller, Robert William Morgan, Henry Bannerman Morison, George Edwin Pearcey, Miles Prior, William Ernest Rielly, George Burton Robinson, William Smith, Edward John Steegman, Frank William Stokes, Henry Ernest Wells, Francis James Worth, Frederick Lumbado.

The following received the Bachelor of Science degree :

Thomas Cook Barkas, Edward Bromley, Thomas Morrison Clayton, William Forrest, F. H. Hake-Francis, Robert James Hughes, Frank S. Jones, Edward A. Lermitte, W. F. Miller, R. W. Morgan, G. E. Pearcey, M. Prior, W. E. Rielly, Wm. Smith, E. J. Steegman, F. W. Stokes, H. E. Wells, F. J. Worth, F. Lumbado.

THE report of the Epsom and Ewell Cottage Hospital for the nine months ending Dec. 31st, 1893, states that of the seventy-four patients admitted for treatment during that period only two died.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—The annual meeting of the subscribers to this charity was held at the hospital on May 5th, Dr. Robertson, chairman of the board of trustees and committee of management, in the chair. The report on the work of the hospital during the year ending April 30th, 1894, was read. The number of cases that have been restored to health through the means of the hospital was shown to be increasing, and the pecuniary support necessary to be forthcoming.

THE WORTHING EPIDEMIC.—The Local Government Board, in response to requisitions from the board of the East Preston Union, in which Worthing is situate, gave last year an undertaking to give all assistance in the direction of sanction to extraordinary expense incurred by the guardians in providing hospitals &c. at Worthing during the late epidemic. The board has now passed all extra payments up to Michaelmas last, totalling £1063 5*s.* 7*d.*, and since that date expenses amounting to upwards of £200 have been incurred. The Local Government Board is considering the latter sum. The temporary water-supply at Worthing continues to be most satisfactory, but an extraordinary waste has been discovered. Tests were made after midnight at varying pressures, and it is estimated that in two hours no less than 26,000 gallons was lost from the mains. The sinkage of the soil after the sewerage works is given as a probable reason, but the matter is being inquired into.

GENEROUS GIFT TO A SHEFFIELD HOSPITAL.—The weekly board of the Sheffield Public Hospital and Dispensary have just received a letter from the agent to the Duke of Norfolk intimating that his Grace, who is the president of the hospital, has promised to subscribe £1000 per annum for five years towards the fund being raised for rebuilding the hospital. The first of the three blocks, the ground floor of which will be devoted entirely to the out-patient department, is now well in hand, the cost of this wing having been defrayed by a very handsome gift of £6150 from the late Mr. Bernard Wake (treasurer), supplemented by a grant of £5000 from the Sheffield town trustees and private donations. It is understood that an appeal for funds to complete the remaining two blocks will shortly be made, and there is little doubt that the inhabitants of Sheffield will liberally follow the generous example of the Duke of Norfolk, and thus enable the weekly board to provide such a hospital as the needs of a large manufacturing community like Sheffield requires.

A CASE of longevity is reported from the little village of Fornham St. Martin's, near Bury St. Edmunds. A Mrs. Letitia Turner has completed her 104th year.

ST. JOHN AMBULANCE ASSOCIATION.—H.R.H. Princess Christian will present certificates to the classes held at the Norwood centre of the St. John Ambulance Association on Monday, June 4th, at the Crystal Palace.

A MEETING of the Church Missionary Society in connexion with the Medical Mission Fund will be held in Exeter Hall to-day (Friday), May 18th, at 3.30 P.M. The chair will be taken by the Rev. F. E. Wigram, M.A. The Rev. Robert Elliott, L.R.C.S.I., Dr. Marcus Eustace, Mr. C. S. Edwards, and Dr. Herbert Lankester are announced to speak.

LITERARY INTELLIGENCE.—The first part has just appeared (Blackie and Son) of a translation of Professor Heiner's "Pflanzenlehre" by Professor F. W. Oliver of University College. This work has a wide reputation for the clearness and vividness of its style, as well as for the manner in which the facts of the physiology of plant life are marshalled and presented.

AT the meeting of the Society of Medical Officers of Health, which will be held on Monday next, the 21st inst., at 20, Hanover-square, W., Dr. Herman, the President of the Obstetrical Society, will introduce for discussion the Etiology of Puerperal Fever. Members of the profession interested in the subject are invited to attend.

PRESENTATION. — Mr. John Augustus Ball, M.B. Lond., M.R.C.S., of Wantage, Berks, has been presented with a massive silver salver, accompanied by a handsomely framed illuminated list of the subscribers. The salver bears the following inscription : "Presented to Mr. J. A. and Mrs. Ball by friends as a farewell gift on leaving Wantage."

MEDICAL OFFICERS OF FRIENDLY SOCIETIES AND THEIR REMUNERATION.—At a private meeting of the members of the medical profession of Southampton and neighbourhood, held on April 28th, a committee was formed with the object of conferring with representatives of the various provident clubs as to the advantages that would accrue to the societies if an increased rate of remuneration were given to the medical officers. The conference was held on Thursday, May 10th, when Sir Dyce Duckworth delivered an address "On the relation of Medical Advisers to Provident Clubs and Medical Aid Associations." It was suggested that the club payments should be raised from 4*s.* to 6*s.* a year; that well-to-do persons should be carefully excluded from benefits to which they have no claim; and that medical aid societies should be abolished. Although the medical committee had expressed their desire to meet the club representatives in a spirit of friendliness, some of the delegates opposed the suggestions in a spirit the reverse of that which they had been invited to exhibit. This matter is one of grave importance to the medical profession, and we hope to be able to refer more fully to the Southampton meeting.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, MAY 10TH.

Belfast Workhouse (Lunatic Department).

MR. JOHN MORLEY informed Mr. M'Carlan that the number of inmates in the lunatic department of the Belfast Workhouse on Dec. 14th was 505, and 99 persons had since been admitted, making a total of 604 under treatment. Out of this number there had been 42 deaths. He had received from Dr. O'Farrell, one of the inspectors, a report in reference to an inspection made by him. The total number of deaths during the present year undoubtedly represented a very excessive mortality, but Dr. O'Farrell informed him that, with only one exception, the deaths were all due to natural causes. After a very careful perusal of the report he had come to the conclusion that there was no reason for instituting further inquiry.

The Alleged Increase of Insanity.

Mr. John Redmond asked the Chief Secretary to the Lord Lieutenant of Ireland if he had observed that the special report of the Inspectors of Lunatics on the alleged increase of insanity, recently presented, conflicted with their statutory reports, annually laid before Parliament, on the subject of increase, and whether any explanation of the

difference could be given.—Mr. John Morley said that the Inspectors were at present absent from Dublin, and, therefore, he was not in a position to answer the question.

Field Hospital Training in India.

Mr. Byles, on behalf of Mr. Alpheus Morton, asked the Secretary of State for India whether, in view of the orders given by the Secretary of State for War for field hospital training to be given at Aldershot, similar orders would be given for field hospital training in India.—Mr. Henry Fowler said that a copy of the Aldershot scheme had been sent for the consideration of the Government of India.

The House at its rising adjourned until Monday, May 21st.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARTHUR, J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Gabalfa Sanitary District of the Cardiff Union.

BEGGS, JAMES E., B.A., M.B., B.C. Camb., D.P.H., has been appointed Assistant Medical Officer at the North-Eastern Hospital, Tottenham.

BELL, THEODORE, M.D., B.Ch. Dubl., has been appointed Medical Officer for the Warrenpoint Dispensary District, vice Douglas.

BONE, ROBERT, M.B., C.M. Edin., has been reappointed Parochial Medical Officer for Insch.

BURY, E. C., M.D. St. And., M.R.C.S., has been appointed Honorary Medical Officer of the North Cambs Hospital.

CHALMERS, A., M.B., C.M. Edin., has been appointed Medical Officer to the Fever Hospital, Bannockburn.

CLARK, A. W., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer of the North Cambs Hospital.

COLWELL, J. R., has been reappointed Public Analyst for St. Giles-in-the-Fields, London.

COXON, S. A. T., L.D.S. R.C.S. Irel., has been reappointed Honorary Dental Surgeon of the North Cambs Hospital.

CULROSS, JAMES, M.B., C.M. Glasg., has been appointed Medical Officer of the Workhouse, Newton Abbot.

DOUGLAS, C. E., M.D., C.M. Edin., has been appointed Medical Officer of Health under the Cupar, Fife, Police Commission.

DURANT, W. J., M.B., B.S. Durh., has been appointed Surgeon to the Hospital for Diseases of Women, Newcastle-on-Tyne, vice Charles Gibson, M.D., deceased.

FOSTER, J. R., M.B., M.S. Edin., has been appointed Resident Medical Officer to the Cardiff Workhouse.

GREY-EDWARDS, C., M.B., B.S. Dubl., has been appointed Vaccination Officer for the Beaumaris Sanitary District.

JONES, J., M.R.C.S., has been appointed Surgeon to the Dewsbury and District General Infirmary.

LEATHEM, ROBERT R., B.A., M.B., B.Ch., Royal University, Ireland, has been appointed Assistant Resident Medical Officer to the North-West London Hospital.

MARSDEN, HERBERT H., L.R.C.P., L.M. Irel., M.R.C.S., has been appointed Medical Officer to the Ormskirk Post Office.

MCGLASHAN, JAMES, M.B., C.M. Glasg., has been appointed Parochial Medical Officer for Rattray and Kinloch.

MCLEOD P. B. H., M.D., C.M. Aberd., has been reappointed Parochial Medical Officer for the South Division of New Deer, Aberdeenshire.

MITCHELL, A., M.B., C.M. Aberd., has been reappointed Parochial Medical Officer for New Deer, Aberdeenshire.

MUDGE, JAMES, L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Marazion Sanitary District of the Penzance Union.

NESS, R. B., M.B., C.M. Glasg., has been appointed Honorary Physician to the Royal Hospital for Sick Children, Glasgow.

NICOLL, J. H., M.B., C.M. Glasg., has been appointed Honorary Surgeon to the Royal Hospital for Sick Children, Glasgow.

ORCHARD, J. S., M.D., C.M. Abern., M.R.C.S., has been appointed Visiting Physician and Surgeon to the Chorlton Workhouse.

PALMER, H. L., M.R.C.S., has been reappointed Medical Officer of Health for the Newtown Sanitary Urban District.

PENNY, E. J., M.D. Brux., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the First Sanitary District of the Tonbridge Union.

RICHARDSON, R. T., M.R.C.S., has been reappointed Medical Officer of Health for the Trowbridge Urban Sanitary District.

ROBINSON, E. S., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for Stourbridge.

SARJEANT, JOHN F., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Medical Officer to the North-West London Hospital.

SHORTRIDGE, T. W., M.D. Brux., L.R.C.P., L.R.C.S., L.M. Edin., has been reappointed Medical Officer of Health for Honiton.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Junior House Surgeon. Salary £50 per annum, with board, washing, lodging, &c.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £70 per annum, with board and residence.

BRISLINGTON HOUSE PRIVATE LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Salary £250 per annum, with furnished apartments, board, and washing.

COUNTY LUNATIC ASYLUM, Lancaster.—Assistant Medical Officer who shall act as Pathologist, for five years, unmarried. Salary £100, increasing by £25 annually to £200, with board, &c. Also Assistant Medical Officer, for five years, unmarried. Commencing salary £100 per annum, with board, &c. Also Clinical Assistant, for six months. Board, &c., provided. Also a qualified Dispenser, unmarried. Salary to commence at £50, with board, &c.

EARLSWOOD ASYLUM FOR IDIOTS, Redhill, Surrey.—Fully qualified Practitioner (married preferred). Salary £500, with furnished residence in the building, together with coals and gas.

FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house, rent and taxes free; also coal, light, water, and cleaning, or in lieu thereof £20 per annum.—Applications to the Secretary, Board-room, Bajillt-street, Holywell.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Junior House Surgeon. Board, apartments, and laundry provided.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Casualty Officer, who will be required to act as Registrar and Assistant Anæsthetist. Honorarium at the rate of 50 guineas per annum.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent-square, Westminster.—Anæsthetist.

HOSPITAL FOR SICK CHILDREN, Newcastle-on-Tyne.—Resident Medical Officer. Salary £50, with board, lodging, and laundry.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, 32, Portland-terrace, Regent's-park, N.W.—Physician to Out-patients.

JAFFARY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly-hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

LANCASTER INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £80, with residence, board, attendance, and washing.

LIVERPOOL STANLEY HOSPITAL.—Assistant Honorary Surgeon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners.

ROYAL FREE HOSPITAL, Gray's-inn-road, W.C.—Two Resident Medical Officers for six months. Board, residence, and washing provided.

ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, S.E.—House Surgeon, non-resident. Salary £60 per annum.

ST. LUKE'S HOSPITAL, London, E.C.—Two Clinical Assistants for six months. Board and residence provided.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House Surgeon, single, for two years. Salary £100 a year, with board, lodging, and washing.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident Medical Officer as House Physician for six months. Salary £20, with board and residence in the hospital.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident Medical Officer as House Surgeon, for six months. Salary £20, with board and residence in the hospital.

VICTORIA UNIVERSITY, UNIVERSITY COLLEGE, Liverpool (MEDICAL SCHOOL).—George Holt Chair of Pathology. Endowment £375 per annum, together with share of fees. Applications to the Registrar. Also, Derby Chair of Anatomy. Endowment £375 per annum, together with share of fees. Applications to the Registrar.

Births, Marriages and Deaths.

BIRTHS.

COX.—On April 20th, 1894, the wife of J. Herbert Cox, M.R.C.S., L.R.C.P., at Gloucester House, Cape Town, of a son.

CRAMPTON.—On May 14th, at Bond street, W.C., the wife of T. H. Crampton, L.R.C.P.I., L.R.C.S.I., of a son.

PRICKETT.—On May 12th, at Oxford-square, the wife of Marmaduke Prickett, M.D., of a daughter.

RUSSELL.—On May 13th, at Plas Allt-ram, Holyhead, the wife of William Fox Russell, M.B., Trinity College, Dublin, of a son.

SCOTT.—On May 10th, at Fitzwilliam-square, Dublin, the wife of Dr. J. Harrison Scott, of a son.

SINCLAIR-SMITH.—On May 7th, at Hillbank House, Monifieth, N.B., the wife of Dr. R. Sinclair-Smith, of a son.

SMYLY.—On May 13th, at the Rotunda Hospital, Dublin, the wife of W. J. Smyly, M.B. Dubl., of a daughter.

SUGDEN.—At Bundaberg, Queensland, the wife of D'Arcy Sugden, L.R.C.P. & Lond., of a daughter.

WEBBER.—On May 13th, at Sutton Valence, Kent, the wife of Edward S. Webber, M.B. Cantab., of a son.

MARRIAGE.

ELLIS—ROTH.—On May 12th, 1894, at the British Consulate, Geneva, Robert Kingdon Ellis, M.A., M.B., B.Ch. Oxon (late Demy of Magdalen College), to Edith May Roth, younger daughter of the late Mathias Roth, M.D., of Divonne, Ain, France, and 48, Wimpole-street, London.

DEATHS.

BRUCE.—On May 8th, at Colinswell House, Burntisland, Fifeshire, Dr. Henry Alexander Bruce, Principal Inspector-General of H. M. Forces, aged 86.

GRAHAM.—On May 12th, at Asfield Villa, Chamberlain-road, Edinburgh, Archibald Graham, M.D., H.E.I.C.S., late Deputy-Inspector-General of Hospitals, Bombay Army, in his 95th year.

STONE.—On May 14th, at King's-road, Wimbledon, Thomas Madden Stone, late of the Royal College of Surgeons, aged 79 years.

TWINING.—On May 7th, at the South Devon and East Cornwall Hospital, Plymouth, from the effects of an accident, Alfred Hughes Twining, M.D., of Salcombe, aged 41.

N.B.—A fee of 2s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 17th, 1894.

	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
May 11	29·86	S.W.	54	50	86	68	44	0·34	Cloudy
,, 12	29·90	N.	51	50	80	59	50	0·13	Raining
,, 13	30·12	W.	53	48	109	64	43	..	Bright
,, 14	29·98	S.W.	54	50	114	68	50	..	Raining
,, 15	29·87	E.	58	54	111	69	50	..	Cloudy
,, 16	29·89	E.	61	58	111	67	56	0·07	Hazy
,, 17	30·10	N.E.	53	52	105	62	51	..	Overcast

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

THE MIDWIVES BILL.

Dr. Stanley Haynes of Malvern sends us a copy of a letter he has addressed to the Secretaries of the Midwives' Registration Association, expressing his objection to sign in favour of the Bill till it has been properly discussed in the Upper House. So many changes happen to Bills by unexpected amendments often carried by snap divisions and before any proper discussion. He thinks that the profession might find itself confronted by a rival and inferior mass of female practitioners, who would presume on their status unless that is accurately defined and rigidly restricted in a Bill previous to its final passage through Parliament. We quite agree with Dr. Haynes in thinking that in any such Bill the status of the midwife, and its limitations, must be most accurately defined.

Fair Play.—Assuming our correspondent's statement to be correct and also complete, he would seem to have been badly treated. He clearly has no remedy, however, unless he can prove malice and damage, and it would surely be very imprudent that he should attempt to do this.

"RETRACTED NIPPLES."

To the Editors of THE LANCET.

SIRS,—"Inquirens" will find a description of a simple operation for retracted nipples in THE LANCET of July 6th, 1889. It is called "Kehrer's operation," and is described by Dr. G. E. Herman.

I am, Sirs, yours faithfully,

HENRY SUTHERLAND, M.D.

Richmond-terrace, S.W., May 11th, 1894.

*** Several other correspondents have replied to the same effect.—ED. L.

THE UNDERGRADUATE ANTHOLOGY.

THE songs written for the *symposia* of University youth have mainly proceeded from the German schools. Indeed, a collection of "Burschen-Lieder," chiefly in Latin, has for many years been quite popular in the Fatherland, even in extra-academic circles. Next though *longo intervallo*, in number and merit come those of the Italian Universities, of which a specimen was given in THE LANCET'S special report of the Bologna Octocentenary in 1888. Now we have to add another, composed expressly for the Third "Congresso Universitario Nazionale," which recently held its sittings at Turin. The composition is in rhyming verse, and the music to which it was sung was decided upon after a severe competitive trial. This latter, including the chorus, a highly effective one, written for two voices (tenor and bass), earned for its author the grand gold medal traditionally awarded to the successful candidate for such honours. The various departments of study (represented by freshmen, law students, arts students, medical and nature students, mathematical and physical students) are enumerated in series. Then follows a strain of aspiration ending in invocation, the whole forming a fluent enough

CANTICUM UNIVERSITARIUM.

Novicii.
Ecce venimus, sodales,
Quales vos nos quoque tales
Almæ matris filii.

Juristæ.
Cocquales Tribonianus,
Caius, Paulus, Gratianus,
Facit nos et Salvius.

Artistæ.
Facit Maro, facit Plato,
Varro, Homerus atque Cato,
Flaccus, Livius, Cicero.

Medici et Naturalistæ.
Nos cœquat et Galenus,
Celsus, Trotula, Serenus
Maximusque Hippocrates,
Aristoteles divinus
Plinius quoque Comacinus
Theophrastus Lesbius.

Mathematici.
Et Euclides Megarensis
Et Hipparcus Bithynensis
Archimedes Siculus.

Chorus.
Pares nos coram Rectore
Pares coram Professore
Super scamnis aulæ.

In amore puellarum
In deliciis chorearum
Et sub furca examinis,
Simul volumus studere
Simul volumus gaudere
Simul lauream capere.
Eia, Medici et Legistæ,
Mathematici et Artistæ,
Macti simus animo!
Nobis imperent faventes
Rector, Præsides, Docentes,
Tum Bidelli faveant.
Conclamata ter et quater
Hodie et semper alma mater
Sit nostra Universitas.
Semper floreat, et una
Patriæ nostræ cum fortuna
Stet per omnia sæcula.

Brigade-Surgeon (South Wales).—The preparation mentioned by our correspondent has been used in such cases with good results.

THE GRIFFITHS FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly acknowledge the following subscriptions to the above fund received by us since your last issue?

Amount already acknowledged	..	..	£80	19	6		
H. Charlton Bastian (London)	..	..	2	2	0		
W. Morgan (Swansea), per Hon. Secs.	..	..	2	2	0		
F. B. Evans (Swansea)			2	2	0		
E. Rice Morgan	,,	..	1	1	0		
William Morgan	,,	..	1	1	0		
M. O'Sullivan (Swansea)			£1	1	0		
J. & J. K. Couch	,,	..	1	1	0		
N. M. Grose (Swansea), per Hon. Secs.	..	..	1	1	0		
J. T. Davies (Swansea), per Hon. Secs.	..	..	1	1	0		
F. G. Southern (Llandebie)	..	..	1	1	0		
David Davies (Aberdare)			1	1	0		

We are, Sirs, yours faithfully,

E. LE CRONIER LANCASTER, W. F. BROOK, } Hon. Secs.

Swansea, May 15th, 1894.

A MIDWIFE AND DEATH CERTIFICATES OF NEWBORN CHILDREN.

THE *Evening Standard* of May 10th contained a report of a very lively altercation between a midwife and Mr. Braxton-Hicks, the coroner. She had signed a certificate of stillbirth in a child which Dr. Freeman declared had breathed and would have lived but for want of attention at birth. The coroner had often had to reprove her for such practices. The jury expressed the opinion that she should not attend any more cases and should be censured. She promised she would never attend another case, "but would sell watercresses first."

G. C. W.—The treatment alluded to by our correspondent has been tried on the continent with apparent success. In the hands of English physicians it has not given the same hopeful results.

PAYMENT FOR MEDICAL SERVICES.

THE defendant in the case of Hiddingh *v.* Crump sought to evade the payment of five guineas (the charge of Mr. Hiddingh of Bognor for treating the patient for a crushed hand and a broken finger), on the ground that he was not responsible for the accident which caused the injury. That is a contention proper to be urged between him and those whom he blames for the accident. But it is a bad excuse for not paying his medical attendant. The judge gave judgment for the plaintiff with costs.

M. C.—We do not know of any special treatise on the subject, but every general text-book on medicine deals with the use and abuse of morphine.

MEDICAL PRACTITIONERS AND DRUGGISTS IN BELGIUM.

A MEDICAL MAN in Antwerp has recently been fined twenty-five francs for having advised a patient to "change his druggist because the medicine he had prescribed could not have been properly made up, from the little effect it produced." The druggist declared that he had used the best drugs, and successfully appealed to a court of law. The ground on which judgment was given against the defendant was that he had "failed to keep the rules of good confraternity and the instructions of the royal decrees of 1885," one of which directs that medical men are to keep a watch over the medicines their patients obtain, and in case they discover anything wrong they are to seal up the bottle and give notice to the President of the Medical Commission, who will send for it and have it officially examined.

"MEDICAL PAY IN UNION DISTRICTS."

To the Editors of THE LANCET.

SIRS,—Never has it fallen to my lot before to take up my pen and express my views in regard to the shamefully low salary which medical officers acting in the above capacity receive. It is very high time that such medical officers were honourably paid. It is perfectly correct to state that in no one of the other three learned professions are the members paid such paltry and insignificant sums for equivalent work rendered as are the medical officers of union districts paid. And who will venture to assert that the duties of the latter are the least important?—and yet it looks remarkably like it if we are to judge from the stipends; which, looked at in the light of honesty, must be the only just and honourable criterion. The poor exist in multiple numbers everywhere. Their health is a matter of national importance viewed in all aspects. How, then, can Prime Ministers, legislators from the highest to the lowest, expect the results to be anything what they might when their medical officers are paid only starvation salaries. A short time ago I applied to the board of guardians for an increased salary. I handed in a written statement which proved incontestably that, after paying all expenses in connexion with the appointment, I had a balance of about £12 per annum; furthermore, the work to be got through I showed was always great, but sometimes appalling, as many as thirty-five visits a day and fifty bottles of medicine, with many, many miles to travel—all, as I have said, in one day. My application came on—after several vexatious and unnecessary adjournments. It was decided in five minutes, yet I had taken many hours of trouble in managing my claims. The guardians said, if we increase his we shall have to increase the salaries of our other medical officers; besides, we can easily get another man to do it for the amount he receives or less. Therein is our difficulty and herein lies our remedy—namely, in order that the salaries of all our medical officers shall be greatly increased I urge that we strike all over the empire, and, in order to prevent others taking up our vacated posts, that we compel the General Medical Council to decree that anyone taking up the vacated posts that he (or she) shall thereby have their names erased from the Medical Register. The first thing, then, to do is to form ourselves into a body, pass our rules and regulations, approach the General Medical Council and get them to ratify them, and then for us to strike. Then, and only then, shall we get our just demands. We have stood the present pay long enough, and too long; therefore, in urging a general strike throughout the country, and if necessary throughout the empire, I am agreeing with your correspondent "Medicus," and beg to subscribe myself,

Yours truly,

May 14th, 1894. STRIKE, STRIKE.

ANSELL *v.* TAIT.

THE following subscriptions have been received since our last list was published:—

Dr. J. F. Goodhart	£5	5	0	Dr. J. Langton Hewer ..	£1	1	0
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I am, Sirs, yours faithfully,

Swansea, May 15th, 1894. W. F. BROOK.

ERRATUM.—In Mr. Pugin Thornton's letter on Influenza, which appeared in our last issue, the word "influence" has been printed for *influenza*.

A GREEK TYPE-WRITER.

IT speaks a good deal for the popularity of type-writing that a typist should find it worth while to have a machine constructed to write in Greek. This has been done by Mrs. Marshall, of 38, Trinity-street, Cambridge, whose address we give in case any of our readers may desire to know where they can get their MSS. written in Greek reproduced. We believe only one other Greek type-writing machine has yet been constructed.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Great Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Great Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Chelsea (2 P.M.), Soho-sq. (2 P.M.), North West London (2 P.M.)

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—Annual Conversazione. Oration at 8.30 P.M. by Dr. William M. Ord, on "A Doctor's Holiday."

SOCIETY OF MEDICAL OFFICERS OF HEALTH (20, Hanover-square, W.). Discussion on the "Etiology of Puerperal Fever." The subject will be introduced by Dr. Herman (President of the Obstetrical Society).

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. Dempster (communicated by Dr. Mitchell Bruce): Relations between Kinds and Conditions of Soils and the Life of the Cholera and Typhoid Bacilli.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Annual General Meeting; Report of Council; Election of Officers. Papers:—Dr. Chuuton: A case of Pancreatic Cyst with Diabetes; Incision of Cyst; Death a year afterwards; Atrophy of Pancreas.—Dr. Rose Bradford: A case of Intracranial Aneurysm.—Dr. Hale White: Two cases of Intracranial Aneurysm.—Dr. Diver: On the Use of Chlorine Gas in the Treatment of Chronic Ulcers of the Leg.—Dr. Sansom: A case of Purpura Hæmorrhagica probably due to Influenza; Treatment by large doses of Sodium Sulpho-carbolate; Recovery.

LECTURES AND ADDRESSES.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Dr. Edward Law: Examination of the Throat and Nose.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (Middlesex Hospital Medical School).—4.30 P.M. General Meeting.

ST. JOHN'S HOSPITAL FOR SKIN DISEASES (Leicester-sq., W.C.).—6 P.M. Dr. Morgan Dockrell: Eczema.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Hyslop: Stupor, Catalepsy, Katatonia, Dementia.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Herpes, its Varieties.

METROPOLITAN HOSPITAL (Kingaland-rd., N.E.).—5 P.M. Dr. Davies: The Thyroid Treatment of Myxœdema and certain Skin Diseases. (Post-graduate Lecture.)

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. John J. Morgan: Clinical Lecture.—National Hospital for Paralysed, Bloomsbury, 2 P.M., Dr. Buzzard: Cases in the Hospital.—Central London Sick Asylum, Cleveland-street, W., 5.30 P.M., Mr. Jonathan Hutchinson: Cases in the Wards.

FRIDAY.—LONDON HOSPITAL MEDICAL COLLEGE.—4 P.M. Mr. Jonathan Hutchinson: On the Treatment of Strangulated Hernia.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Corner: Delusional Insanity; Paranoia.

During the week marked copies of the following newspapers have been received:—*Western Mail, Worcester Journal, Kentish Express, Bolton Journal, Hampshire Advertiser, Oldham Chronicle, Colchester Gazette, Devon and Exeter Gazette, Newcastle Daily Journal, Vegetarian, Cheltenham Examiner, Western Morning News, Birmingham Gazette, Scotsman, Llangollen Advertiser, Coventry Mercury, Chester Courant, Sheffield Independent, Times of India, Manchester Courier, Norfolk Daily Standard, Dundee Courier, Pioneer Mail, Builder, Ceylon Observer, Sussex Daily News, Scottish Leader, Architect, Sunday Times, Huddersfield Chronicle, Bradford Observer, Oswestry Observer, Liverpool Daily Post, City Press, Local Government Chronicle, West Middlesex Standard, Sanitary Record, Hertfordshire Mercury, Galignani Messenger, Marylebone Times, Somerset County Gazette, Local Government Journal, West Middlesex Advertiser, Science Siftings, Surrey Advertiser, Liverpool Courier, Morning Advertiser, Reynolds's Newspaper, Mansfield Advertiser, Bath Weekly Herald, Journal of Gas Lighting, Journal des Débats, Courrier de la Presse, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. J. Althaus, London;

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